Clinical Lecture

ON

BY-WAYS IN THE STUDY OF DISEASES OF THE SPINE.

Delivered at St. Bartholomew's Hospital,

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GENTLEMEN,—I wish to go a little out of the beaten track and to allude, though I can do so only very briefly, to some of the more uncommon forms of spinal disease that are met with in the course of clinical work.

1. *Curvatures that are met with in the first year of life.*—You know that Pott's disease (tuberculous caries), though it may occur at any age up to seventy, most commonly begins between the ages of three and ten. I have, however, seen several instances in which it commenced in children less than a year old, the earliest being in a child of six months. This infant had distinct angular curvature in the middle of the dorsal region. In cases that occur thus early rigidity of the spine, pain and other symptoms that are met with in older patients are no doubt present, but they are apt to be overlooked and in the cases I have seen they did not attract attention, and the curvature was the first symptom that was noticed. The main fact in the clinical history of caries in young infants is that the disease tends to advance with rapidity and to produce serious curvature so quickly that irreparable deformity may take place in the course of two or three months. The main point in treatment is to keep the child at rest in the horizontal position as absolutely as possible, for in very young children the skin is so readily injured, the breathing is so easily interfered with, and the abdomen is subject to such rapid variations in size from hour to hour that no mechanical appliance can be used with any hope of success. In these early cases prognosis is by no means favourable. In two of the cases I have met with suppuration occurred and the patients died from exhaustion. The second form of curvature that is met with in the first year of life is due to rickets. Rickets produces in older children three varieties of curvature: (1) general bowing of the whole spine backwards; (2) ordinary lateral curvature; and (3) an increase of the lumbar curve forwards (the condition to which mothers make a quaint allusion when they say that the child is "cutting his teeth in his loins"). The first and second of these curvatures are met with in the first year of life, and I may say a word with respect to each. The first, when it is originally developed, assumes the form shown in Fig. 1. Later, if the child is very rickety and is nursed much in the sitting position, it takes the outline shown in Fig. 2. When this is the case it may very

FIG. 1.

FIG. 2.

easily be mistaken for true angular curvature depending on caries; and this mistake is all the more likely to be made because rickety children are often tender, so that they cry when they are lifted; whilst in those infants who are suffering from scurvy-rickets—an affection to which Dr. Cheadle and Dr. Barlow have drawn particular attention,—and in whom every movement seems to produce pain, the pain, together with the curvature of the spine, will, unless you are very careful, inevitably lead you to a wrong conclusion. The diagnosis depends upon the following three points: (1) that rickety curvature is very much more common than angular curvature in young infants; (2) that the child is, as disclosed by other evidence, acutely rickety; and (3) the crucial test, that when the child is placed in the prone position the spine can, without the use of the slightest force, but merely by placing one hand on the loins whilst the other hand in the gentlest manner raises the extended lower limbs and the pelvis in the air, be not only straightened but be carried to the point of becoming concave—a change of outline that would be impossible were true angular curvature present. Lateral curvature, when it occurs in the first year of life, is exactly similar in form to that which is met with in later periods. In the few instances in which I have seen it the patients were very rickety. Diagnosis, therefore, presents no difficulty. Unfortunately as much cannot be said as to treatment. The weakly muscles to a great extent abandon their function of supporting the column, and deformity, reaching an extreme degree and depending on a formidable change in the shape and the relations of the vertebræ to each other, is quickly developed. Probably the worst cases of scoliosis that are met with in young adults are those which have commenced in early life in rickety children. Mechanical appliances in these cases are, as in those of caries in early infancy, very unsatisfactory, and of course the exercises which are so valuable in older children cannot be used. The best course is to treat the rickety state by prescribing a full diet of fresh milk, diluted as far as is necessary, the juice of raw meat, beef-tea or pounded raw meat, plenty of fresh air and small doses of cod-liver oil, and to keep the child as absolutely as possible in the horizontal position. This position will prevent the further increase of deformity; but it will be accessory to much more. The future progress of the case will illustrate one of the most important and striking facts in the surgery of childhood—the fact, namely, that growth, when favourable conditions are secured, is a very powerful agent in the removal of deformity. Distorted parts, in fact, "grow straight." About six years ago an infant fourteen months old came under my notice who was very rickety and had severely marked lateral curvature with rotation. The deformity had been in progress, as far as was known, for about four months and was still increasing. The child was kept for the next eighteen months constantly in the horizontal position in a tray fitted with a mattress, in which it could be carried about. The curvature diminished steadily with the child's growth, which was rapid, and at length it almost entirely disappeared. It must be allowed that this treatment is very tedious; but, as far as I know, in no other way can extreme deformity be averted and a satisfactory result obtained. Gentle massage may be advantageously combined with it.

2. *Quiet spinal caries.*—The symptoms of spinal caries in different individuals are subject to considerable variety. In some instances pain, stiffness and impaired function are present in a marked degree, and in others all active symptoms, except stiffness, are so nearly absent that the main evidence of advancing disease is a slowly increasing angular deformity. But cases are occasionally seen in which the usual symptoms entirely fail to attract attention. Some years ago I met with a patient aged nineteen who had a perfectly distinct angular curvature of the lower dorsal spine, of which he could give no account. His back was perfectly strong and he was leading an active life; and he could not remember any period at which his spine had given him any inconvenience. Such a case may strike you as being very remarkable—even perhaps inconceivable; but I may confirm my own observation by mentioning that both Sir James Paget and Mr. T. Smith have met with exactly similar cases. I think I can throw some light upon the subject by referring to what is not rarely seen in cases of tuberculous disease of the joints—namely, that the inflammation which the tuberculous disease provokes is sometimes plastic in its character and may end apparently in a few months in firm fibrous or even, though perhaps more rarely, in complete bony ankylosis. In these cases—and I have seen enough of them to be quite sure of their occurrence—a joint (it has been most commonly either the elbow or the shoulder) is found to be firmly ankylosed, but how or when the ankylosis occurred the child's parents have been quite unable to explain. It would seem as if the tissues, although unable to prevent the establishment of the tuberculous process, yet maintain a vigorous struggle against its further advance, and, soon winning the day, speedily undergo a sound repair. In this way, perhaps, a case which occurred a few years ago may be explained. A boy aged nine had a perfectly obvious and advancing angular curvature of the dorsal spine, for which complete

rest and a plaster-of-Paris jacket were employed. When this treatment had been followed for six months the patient was taken to a bonesetter, who said that one of the buttons of the back was out. This he proceeded to put in by manipulation—although, as you may suppose, without producing any change in the curvature—and he then ordered the boy to go about as usual. He forthwith did so, and no further development of spinal symptoms has since occurred. Now, the fact is familiar to all that when angular curvature has once become marked sound repair does not generally take place in so short a time as six months; but the form of plastic inflammation leading to rapid ankylosis which I am alluding to may run its course, I am sure, well within this period. It may be useful to draw attention in a pointed way to these cases of quiet disease of the joints and spinal column. Clinically they are certainly of much importance, because they contradict common experience in two respects: firstly, they run their course much more rapidly than the common set of cases do; and, secondly, they always end, as far as I know, in firm ankylosis, which the surgeon can do nothing to avert. Firm ankylosis is a result which, unless you can make an authoritative statement to the contrary, parents will certainly attribute to your method of treatment by fixation; but I am quite sure you are justified in maintaining that it is not due to this treatment. It would have occurred just the same even if no splints had been employed. This is shown, in fact, by the cases which I have mentioned above, whilst, on the other hand, I have frequently seen tuberculous joints recover with absolutely unimpaired movement which have been kept uninterruptedly fixed in splints for eighteen months or two years. In short, ankylosis is determined by the plastic character of the inflammatory process and not by the fact that the joint was kept at rest. Pathologically this occurrence of early ankylosis is a valuable illustration of a fact that cannot be too strongly insisted upon—namely, that the tissues are often successful in their struggle against the advance of tuberculous disease, and that frequently when the struggle is over they undergo a completely sound repair.

3. *Malignant disease.*—Primary sarcoma of the spine is very rare; but let me briefly mention two examples of it. They are instructive, for in both an erroneous diagnosis was made and acted upon. They were, in fact, both mistaken for tuberculous caries attended with the formation of angular curvature and abscess, and in both the resulting swelling was cut into in the belief that a collection of matter was to be evacuated. A girl six years of age had, as it appeared, clear symptoms of tuberculous caries of the cervical spine. The head and cervical spine were kept in a fixed position, as movement caused pain. The child supported her head with her hand as children do when they have spinal caries, and the spine had yielded so that the patient had wryneck. Soon a deep-seated and elastic swelling appeared in the right suboccipital region which was regarded as an abscess. This gradually enlarged and approached the surface, and when superficial enough for fuller examination seemed to fluctuate distinctly. When an incision, however, was made nothing but blood escaped. Subsequently what was obviously a sarcoma rapidly attained a large size, and the child died in about two months. At the post-mortem examination the left halves of the three upper cervical vertebræ were found to be almost entirely destroyed and replaced by new growth. The second case was that of a young woman aged twenty-four who was said to have originally complained of pain behind her left knee when she was sixteen years of age and to have had curvature of the spine at eighteen. She had always been delicate, but had been able to walk until she was twenty-two. She then moved with difficulty and complained of pain in her back and sides. Four months before I saw her she became unable to walk. When I saw her she had very marked deformity of the lower part of the lumbar spine, exactly similar to that which results from caries, and excavation of two or three vertebræ. In the left iliac fossa there was a large, highly elastic, tense swelling which occupied the position of, and presented a perfect resemblance to, an iliac abscess depending on Pott's disease. When the swelling was incised, however, it proved to consist of a large sarcomatous growth. The great rarity of such a case as this and the exact manner in which it assumed the features of a very common disease involving the same parts made it, like the one first related, extremely deceptive. Let me hope that this brief reference to these two examples of a rare disease closely imitating a common one may some day save you from an error into which it is very easy indeed to fall.

The museum of the hospital contains several specimens of sarcoma of the vertebral column. No. 438A shows a sarcoma in a boy aged eighteen, springing from the laminæ of the sixth, seventh and eighth dorsal vertebræ, which, as it grew, destroyed the cord. The patient lived only for six months. In No. 517A the bodies of five vertebræ are extensively destroyed. No. 1130 shows sarcoma of the sixth cervical vertebra on the right side, compressing the cord, in a woman who had primary sarcoma of the uterus, with secondary deposits in the spine, lungs and pericardium. In No. 1132A sarcoma involved the last cervical and four upper dorsal vertebræ in a man aged forty-six.

4. *Carcinoma of the spine.*—This may be one of the secondary developments of carcinoma of the breast and of other parts also. I recently removed the breast of a patient who, having found a tumour which she was afraid might be cancer, had kept the matter to herself for nine months. During this time the growth steadily increased and in the last two months she had suffered from very severe pains in her spine at the level of about the fourth dorsal vertebra and also round the sides of her chest. She had also found great difficulty in walking. When the spine was examined a well-marked angular curvature was found. I am glad of the opportunity of drawing your attention to this case, for it illustrates an important group. If you are to avoid serious mistakes and oversights in practice you must understand not only diseases but the subjects in whom they occur. Amongst other things you must remember that patients, either through fear or for some other motive, will sometimes, with remarkable skill and by recourse to many devices, keep their secret about some disease from which they are suffering, so that their most confidential friends are entirely ignorant of their condition. Let me mention another case. A woman aged forty-three had severe girdle pains round the lower ribs, and pain in the spine, with weakness of the legs. The pain was sometimes intense and she moved with difficulty. Evidently serious mischief was in progress. At first sight the case might have been regarded as one of acute spinal caries, but the severity of the symptoms was out of all proportion to the local evidence, for all that could at this period be made out was that the spine was stiff; there was no angular deformity. As it was thought that possibly a new growth was in progress, the patient was asked about any swelling elsewhere, particularly in either breast, but she said that nothing of the kind was present. When further pressed, however, she allowed that she had known of a swelling in the left breast for eleven months. On examination a far-advanced scirrhus was found, together with extensive enlargement of the axillary glands. A few weeks later angular yielding of the spine became apparent, the pain became very severe, the right lower limb and, three weeks later, the left became paralysed and the patient lost control of urine and fæces, had large bedsores and died eight months after the first symptoms were noted from exhaustion.

No. 1129 in the museum of the hospital consists of the upper cervical vertebræ of a man aged thirty-five, who had suffered for eight or nine months from pain in the neck and shoulders, which was attributed to rheumatism. For the previous four or five months an alteration of his gait had been observed; the shoulders were elevated and the neck was shortened. For two months he had been unable to wear a collar. One month before death the limbs and trunk became paralysed. Power in the left arm and leg first failed and in the course of a few days the paralysis was complete. The urine and fæces were passed involuntarily. The immediate cause of death was paralysis of the respiratory muscles. On examination the second and third cervical vertebræ were found to be almost entirely destroyed by carcinomatous growth. The seat of primary disease is not mentioned. No. 1131 consists of seven cervical vertebræ from a man who died of scirrhous cancer of the breast and secondary deposits in other organs. Five vertebræ are affected with scirrhous cancer. In the first and the last two the cancellous tissue is loaded with the growth, whilst the two intervening vertebræ are almost entirely destroyed. The chief indications of the disease consisted of severe pains like those of rheumatism in the loins and lower limbs. It is not stated whether any paralysis occurred. No. 2540 shows a soft brain-like carcinoma, projecting from the left side of the cervical spine from the fourth to the sixth vertebra. The growth is attached to the posterior surface of the dura mater. A portion of the fourth vertebra is infiltrated and softened. The disease was secondary to carcinoma of the pancreas. The patient was a man aged forty-six, who came under the care of Dr. Ormerod in July,

1879, complaining of constipation and abdominal pain. He had already had pains in the left shoulder and in the previous week had lost power in his left arm. This pain and loss of power in the arm increased and the muscles became atrophied. He had numbness in the fingers and quickly lost flesh. Two months later he began to lose the use of his right hand and complained of pain in the right biceps. In a few days both his legs became paralysed and the paralysis extended and became complete in all parts except the right arm. The respiration became embarrassed and he died in about four months after his symptoms were first observed. The tumour remained deeply seated and was not noticed till the post-mortem examination was made.

The symptoms of malignant disease of the spine bear, you will notice, at first sight a very close resemblance to those of acute Pott's disease. The deformity which occurs is the same, and pain in the column and in the course of the intercostal nerves is also similar in the two affections; yet a closer study will usually disclose certain differences which are sufficient for a correct differential diagnosis. In the first place, pain is generally much more severe from the first—altogether a much more prominent symptom—in malignant disease than it is even in the most acute cases of Pott's disease. In some cases it amounts to agony. Secondly, the disease advances much more rapidly than caries, so that deformity generally makes its appearance very early—in the course of a few weeks—and then rapidly increases. Thirdly, paralysis, at first of a single limb, or even of a single group of muscles, but soon becoming extensive, is very commonly present within the first few weeks, and instead of tending to pass off, as is the case with paralysis due to Pott's disease when the spine is placed at rest, in malignant disease it tends steadily, and often rapidly, to become worse and worse. Fourthly, incontinence of urine and fæces is soon developed and bedsores quickly form. Fifthly, the patient, instead of improving and gaining flesh, as is the case when he is placed at rest for Pott's disease, rapidly loses flesh and becomes feeble and cachectic. Sixthly, the course of the case is a steady and usually a rapid progress from bad to worse, so that, speaking generally, the patient does not survive for more than six or eight months. Lastly, there is in many cases evidence of primary carcinoma in the breast or elsewhere, a circumstance which in any doubtful case he who would avoid mistakes must obviously be determined not to overlook.

5. *Syphilitic disease of the spine.* — This, I believe, is a rare condition. You will find but very scanty allusion to it in the handbooks at present in use, and I have met with it, as far as I know, in only two or three instances. These have been in the tertiary stage of syphilis, and in the form, judging from the symptoms, of chronic osteitis and periostitis, similar to that which may attack any of the long bones. I will briefly relate the case which seemed to be the most clear illustration of the condition that I have seen. A man forty-five years of age came to the hospital with tertiary syphilis, from which he had suffered severely at intervals for upwards of fifteen years. He now had several broken-down gummata on the skull with severe hemicrania and numerous syphilitic scars about his face, trunk and limbs. He complained of severe nocturnal pains in his back and said that his spine was becoming bent and so stiff that he could not stand uprightly. On examination the dorsal curve of the spine was found to be considerably increased,—so that the shoulders were very round and the head was bent forwards. Attempts at movement were unattended with any increase of pain, and so was exercise, except that it produced the aching of muscular fatigue. The patient was ordered five grains of iodide of potassium, which were increased in the course of a few days to twenty grains, three times a day. He rapidly improved in general condition and the gummata were absorbed and his ulcers healed. His hemicrania and also his spinal pain were quickly relieved and the stiffness of the column was much diminished. Six years have since elapsed and he has been seen from time to time. After a course of iodide of potassium he remains for a time fairly well. Then new gummata or cutaneous ulcers make their appearance and pain returns in the head or, with the same feature of severe nocturnal exacerbations, in his spine. This always yields, as do the other lesions, to a fresh course of the iodide of potassium. Each attack, however, has left the spine more arched and more stiff and when I last saw him he was unable to raise his head above the level of his lower dorsal vertebræ. The direct proof that the spinal affection is syphilitic is wanting, as the patient is still living, but that it is syphilitic can, I think, hardly be reasonably doubted when it is remembered that the patient is subject to inveterate tertiary syphilis, that the affection is always combined with other syphilitic lesions, that it is attended with nocturnal pains closely resembling those which affect his head, and that its active symptoms have always readily yielded to a course of iodide of potassium.

An Address

ON THE

SURGERY OF THE AIR PASSAGES AND THORAX IN CHILDREN.

Delivered at the Royal College of Surgeons of England,

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(*Continued from p. 739.*)

Ulceration of the Larynx.

ULCERATION of the larynx in children may be due to tubercle, syphilis, typhoid fever, scarlet fever or measles; it may be the result of the impaction of a foreign body or it may occur without obvious explanation as to its cause. Time will not allow of any attempt at a differential diagnosis between these conditions, and I will merely give illustrative examples:—

Case 53. Tubercular ulceration.—An infant aged eighteen months was admitted to St. Thomas's Hospital on Jan. 10th of this year. The illness began fourteen days before admission with fever and sore-throat. On admission the respiration was 52, there was slight stridor, the throat was red, and there was white membrane on the back of the pharynx and some on the uvula and tonsils. The temperature was 103·2° F. The case was regarded as one of diphtheria. The child died on Jan. 16th. (I am indebted to Dr. Hawkins for the following post-mortem notes.) At the necropsy the tonsils, soft palate and uvula were found to be normal. The whole circumference of the pharynx behind the posterior pillar was deeply ulcerated, the ulcer extending on each side up to the base of the epiglottis, but not on to the base of the tongue. Over the whole floor of the ulcer muscle was exposed, and on the right side the tips of the large cornua of the hyoid and of the superior process of the thyroid and the lateral thyro-hyoid ligament were visible. The ulcerated surface was nearly clean and there was no caseous material, but a few miliary tubercles could be seen on the aryteno-epiglottidean folds. The epiglottis was swollen and red, there being a symmetrical ulcerated notch on each side. The arytenoid cartilage was swollen and red; there was some ulceration, but without much swelling of the cords. No sign of diphtheritic membrane was to be seen anywhere. The bronchial glands were enlarged, showing abundance of miliary tubercle with here and there a tendency to fusion and caseation. Broncho-pneumonia and tubercle were present in both lungs, but there was no tubercle elsewhere in the body.

Syphilitic ulceration.—In vol. xxviii. of the St. Bartholomew's Hospital Reports the following case is recorded. A boy aged thirteen had been under treatment with iodide of potassium for congenital syphilis for a month before the larynx became involved. Fourteen days later tracheotomy became necessary. The iodide was continued, but the tube was required for eight months. The boy left the hospital well at the end of a year. At the meeting of the Royal Medical and Chirurgical Society on April 24th, 1883, Dr. Percy Kidd showed two cases of congenital syphilis of the larynx. The ages of the patients were fifteen years and sixteen years at the time of observation, but the symptoms developed at the ages of fourteen and thirteen respectively. In the first case the vocal cords were red and thickened; the ventricular bands and the aryteno-epiglottic folds were thickened, hiding the vocal cords; the cords were somewhat fixed, and there was a considerable amount of stenosis of the glottis. In the second case the epiglottis was thickened, its margin being irregular, as if it was partially eaten away, but no ulceration was to be seen then. The vocal cords were adherent to one another at their anterior extremities by a web of reddish-grey

colour. The right and left ventricular bands were thickened. In both cases there was good evidence of congenital syphilis.

In *typhoid fever* the ulceration is generally due to a necrosis of the cricoid or the arytenoid cartilages.

Case 54.—A boy aged five years was admitted to St. Thomas's Hospital on May 6th, 1889, and he died on June 5th of the same year. (The brother was in the hospital at the same time suffering from typhoid fever and he recovered.) The illness began three days before admission. The temperature ranged from 102° to 104° F. for the first two weeks; the cheeks were flushed and the patient was wandering in his mind. The abdomen was distended, the spleen was enlarged, and there was diarrhœa, the stools being of a typhoid character. In the third week the temperature fell gradually to normal and his condition began to improve. On May 23th (the twenty-sixth day of the illness) slight inspiratory stridor was noticed, being worse on coughing. On June 1st the inspiratory stridor was observed to be increasing and retraction of the ribs appeared, so that tracheotomy was contemplated. The temperature steadily rose to 103·4°. On the 2nd signs of consolidation of the upper lobe of the right lung developed and he died without any change in his condition. At the post-mortem examination no signs of typhoid fever were to be found in the intestines. The posterior half of the cricoid was necrosed and it lay loose in pus; the pus had burrowed a little upwards and entered the larynx by a round, smooth, ulcerated opening. There was broncho-pneumonia of the upper lobe of the right lung, with collapse.

Case 55.—A girl aged nine was admitted to St. Thomas's Hospital, under the care of Dr. Ord, on Nov. 25th, 1885, and died on Dec. 7th. She had been seized with vomiting and diarrhœa ten days before admission, and when admitted she presented the usual symptoms and signs of typhoid fever. The larynx is in the hospital museum and shows a well-defined ulcerated cavity large enough to hold a pea over the inner surface of the left arytenoid cartilage on a level with and immediately behind the vocal cord. There is no denudation of the cartilage, the cavity being lined with granulation tissue.

Scarlet fever and measles.—At the meeting of the Pathological Society on May 15th, 1883, Dr Norman Moore showed specimens illustrating ulceration of the larynx in a case of measles and also in a case of scarlet fever. Both children were five years of age. In the case of measles the larynx showed signs of ulceration of the cords and the base of the epiglottis. In the case of scarlet fever the ulceration was more extensive and there was also a deep ulcer of the fauces. In neither case was any membrane to be found.

Ulceration from impaction of foreign body is shown in the following specimen from the St. Thomas's Hospital Museum (Fig. 4) of the larynx and trachea of a child six years of

FIG. 4.

age. In the lowest subglottic portion of the laryngeal cavity and altogether below the vocal cords is impacted a quartz pebble about the size of a horse bean. The mucous membrane of the parts in contact with the foreign body is ulcerated, a patch of the thyroid cartilage being exposed in the middle. For several days after the pebble was swallowed it excited great irritation, but in a month the child was said to have been quite well. Two weeks afterwards she had an attack of pneumonia, from which she died at the end of twelve days.[1] The following two cases are interesting examples of ulceration of the larynx, without any explanation as to the cause.

Case 56.—The patient, a child aged four years and a half, was admitted to the Hospital for Sick Children, Great Ormond-street, under my care, on April 22nd, 1887, for loss of voice and noisy breathing. On the Sunday after Christmas Day whilst at dinner eating rabbit he was suddenly attacked with a paroxysm of dyspnœa and became black in the face. Loss of voice followed. The next day he had signs of acute laryngitis, and tracheotomy was contemplated by the medical attendant. On inquiry it was ascertained that twelve months before the child had suffered from loss of voice for two days, but with this exception he had always been able to speak and to cry well until the supposed swallowing of the rabbit bone. According to the father the breathing for some time after this had been like a "pig snoring." The father and mother were healthy, but there was a history of phthisis on the mother's side. On admission the patient, a well-nourished child, was able to speak in a whisper only; there was slight dyspnœa at night. Laryngoscopic examination was made, but nothing abnormal was to be seen. On April 30th a high tracheotomy was performed, some small bodies looking like papillomata could be seen just below the cords and the diagnosis of papillomata of the larynx was accordingly made. On July 5th the thyroid was opened in the middle line for three-quarters of its extent, when it was found that the mucous membrane on the right side, just below the right vocal cord, was ulcerated and the supposed papillomata were portions of mucous membrane which had lost their attachment to the cord. The edges of the ulcer were undermined and serrated. A prolonged search was made for any evidence of a foreign body, but nothing could be found. The ulcer was scraped and dusted with iodoform. The boy made a quick recovery and was out for a drive in ten days; in three weeks the wound had closed completely and he left for home with a return of fair voice. In February, 1888, the father wrote to say that the boy was well and strong, could speak plainly and heard distinctly at a distance of fifty yards. The diagnosis in this case must remain obscure, but it would seem most probable that a small portion of bone was impacted for a time in the larynx and produced the ulceration, the bone afterwards being coughed out unknown to the parents. Dr. Murray[2] records a case of ulceration just below the right vocal cord, followed by sudden and extensive emphysema. A patient aged eighteen months was admitted into Charing-cross Hospital under the care of Dr. Bruce with a history of five months' illness. On admission there were high temperature, cough and signs of broncho-pneumonia. Twelve hours before death emphysema suddenly appeared in the neck and extended to the clavicles and right cheek. At the necropsy a sharp, circular ulcer one-third of an inch in diameter was found just below the posterior termination of the right cord. The child had not suffered from acute illness and there was no history or evidence of the existence of a foreign body.

Foreign Body in the Air Passages.

The symptoms attending the introduction of a foreign body into the air passages and its lodgment there are so well known that a recapitulation of them is unnecessary. On most occasions the diagnosis is clear, but occasionally, in the absence of history and from special peculiar features in the case, it is very difficult to arrive at any certain conclusions. On the other hand, the history of swallowing a foreign body may be imaginative on the part of the friends and have nothing to do with the case under consideration. When we remember how constantly children are running about at play with some foreign body in their mouths and how often they laugh or cry quite suddenly in the act of eating their food it is remarkable that the accident does not more frequently occur. The air passages may become suddenly filled with fluid or powdered substance. In the "Annals of Universal Medical Science," 1891, reference is made to a case reported by Emile Müller which illustrates this condition.

An infant five months old on being laid down one morning after nursing made a grimace as though it were sick, became cyanosed and died in a few minutes. At the post-mortem examination the thymus gland was found to be larger than usual and the larynx, trachea and bronchi and all their divisions were found to be full of milk. A boy aged fourteen years was admitted in a moribund condition

[1] Medical Gazette, vol. xviii., 1836.
[2] Transactions of the Pathological Society, vol. xiii.

to St. Thomas's Hospital on Feb. 1st, 1877, having fallen from a height into a heap of bran. Tracheotomy was at once performed, but without affording any relief. At the post-mortem examination the larynx, trachea and bronchi down to their second divisions were found to be filled with a firmly moulded mass of bran. As the result of the introduction of a foreign body into the larynx or trachea a fatal result may almost directly follow, either from continued spasm or from complete mechanical obstruction. Mr. Houchin of Stepney relates the case of a boy aged eight years who was brought into his surgery and died directly afterwards.[3] At the post-mortem examination a toy called a "squeaker" was found in the larynx and trachea. A squeaker is a little wooden tube about an inch long, having a diameter the size of a common pencil-holder, and containing a whistle, with an indiarubber ball attached. A similar case occurred in New York, the patient, a boy aged eight years, dying almostimmediately after swallowing the toy. The following most extraordinary case is recorded by Dr. Rake.[4] A child five years old, after a slight cough followed by unconsciousness, died in five hours. At the post-mortem examination the stomach was found to be full of food. There had been no vomiting. A round worm three inches long was detected at the upper orifice of the larynx. No other worms were to be seen in the alimentary canal. When a foreign body is impacted in the larynx after the initial paroxysm has subsided the symptoms may be very slightly marked, though usually there are alteration of the voice and some cough and dyspnœa, with pain and tenderness about the larynx. The difficulty of diagnosis in very young children may be very great. A child aged twelve months was taken ill on Jan. 19th, 1884, suffering from difficulty of breathing and cough. Tracheotomy was performed on Jan. 21st; the operation gave great relief, but pneumonia caused death on Jan. 31st. At the post-mortem examination both lungs were found to be solidified by pneumonia. On

FIG. 5.

opening the larynx a small ulcer was to be seen below the right vocal cord on the posterior wall of the larynx, and from this a minute dark object projected which proved to be the fish vertebræ shown in the specimen. (Fig. 5.) Occasionally even in children the foreign body may be seen with the laryngoscope. Dr. S. Smith was able to thus detect a dark metallic mass below the cords in a child five years old who was brought to the Halifax Infirmary suffering from dyspnœa after swallowing a button. Tracheotomy was performed, and the button was afterwards extracted through the wound. In the case of a boy fourteen years of age, who was admitted to St. Thomas's Hospital in 1882, Dr. Semon was able by laryngoscopic examination to extract a pin which had for thirteen months been embedded in the left aryteno-epiglottic fold, the point being just visible by the laryngoscope. There was a distinct history of the accident; the boy had localised pain on the left side of the larynx and was unable to swallow solids. If a foreign body remains in the larynx it may at any time prove fatal by giving rise to inflammatory œdema of the glottis; or (as has been shown by the cases narrated) the ulcer may occasion pneumonia. The body may be expelled by coughing or by changing its position and pass into the trachea or one of the bronchial tubes. If it remains for a prolonged period in the larynx the voice is likely to be permanently affected, and such stenosis of the larynx may result as to necessitate the wearing of a tracheotomy tube. Dr. H. L. Fountain[5] reports the case of a child aged four years who, one year previously to operation, had sucked a safety pin into its larynx. The immediate symptoms subsided and the child became fairly comfortable; later the child had daily attacks of paroxysmal cough, terminating in free discharge of pus through the mouth. For this tracheotomy was performed and the safety pin was removed through the incision. The child recovered, but the voice was only partially restored. In the case of a boy who had tracheotomy done for urgent dyspnœa at St. Thomas's Hospital a portion of a walnut shell was afterwards discovered in the larynx, and it was removed by thyrotomy. All attempts afterwards to dispense with the tracheotomy tube failed, and the boy could only speak in a harsh whisper. When a foreign body is lodged in the trachea there are usually signs of its presence on auscultation, and the recurrent attacks of dyspnœa as the body changes its position are very characteristic. In a case described by Dr. M. Thompson of Lincoln a boy four years old had difficulty of breathing after swallowing a pea, and by nipping the trachea between the finger and thumb something could be felt to shoot up and down like the valve in a Higginson's syringe. As a typical illustration of a foreign body in the trachea I cannot do better than to refer to a case reported by Dr. Hunt.[6] A boy four years old fell with some pebbles in his mouth. One of the pebbles was drawn into the air passage. At first the boy was in great danger of suffocation, but when seen by Dr. Hunt two hours later he was tranquil and playing with his toys. When, however, he was made to cough the situation of the pebble was at once manifest from the convulsive attack of suffocation produced, attended with wheezing and rattling in the throat. During the day these attacks were frequent, but the child was tranquil in the intervals. High tracheotomy was performed and the pebble easily removed. During the next few days the child had rapid breathing and was very ill. He was treated by large doses of colchicum and digitalis, with aperients, and was four times bled from the arm, on each occasion with relief to the symptoms. A week later, as he was much reduced, a more generous diet was ordered and the following note occurs: "Omittantur medicamenta." After this recovery was rapid. Dr. Earle, in his remarks on the case, points out how medical men and the friends of patients may be deceived by the state of calm which often occurs after a foreign body has passed the rima glottidis and which has induced them to doubt the presence of anything in the trachea. A body may become fixed in the trachea and the signs will be modified acordingly. A child one year and ten months old was admitted to the Hospital for Sick Children, Great Ormond-street, on Aug. 30th, 1887, under the care of Dr. Abercrombie. She had some distress in breathing, the voice was nearly natural, but loud inspiratory and expiratory stridor could be heard over the trachea, these sounds being conducted in a less degree to both sides of the chest. The child had been quite well five weeks before admission, when she was suddenly seized with a severe fit of choking whilst eating some chicken. On Sept. 10th I opened the trachea just below the isthmus and on holding the trachea open with hooks a foreign body was seen to be lying in a bed of granulation tissue on the left side of the trachea, opposite to the incision. This was extracted with forceps and proved to be a portion of the rib of a chicken. The granulation bed was scraped and the spot dusted with iodoform; the tracheal opening was then carefully sutured with catgut and the soft parts with silk sutures. Within an hour of the operation the child was sitting up in bed asking for food; four days later the wound was perfectly united. In this case the body was fixed to the side of the trachea and consequently recurrent spasmodic attacks did not occur. The primary suturing of the trachea certainly hastened the cure and diminished the risk of bronchitis. This would not have been advisable if the foreign body had been impacted in the upper part of the trachea near the larynx. Early in 1891 a child aged five months was admitted to the Hospital for Sick Children, Great Ormond-street, suffering from urgent dyspnœa, having swallowed a string of beads. Tracheotomy was performed at once by Mr. Brook, the house surgeon, and the string of beads was removed from the lower part of the trachea by a bent probe. The child made a good recovery, but was readmitted five weeks later suffering from broncho-pneumonia and difficulty of breathing. Intubation was tried for four days and then tracheotomy was again performed. At the post-mortem examination there were found to be broncho-pneumonia of both lungs, some swelling of the vocal cords and ulceration of the trachea at the bifurcation. No doubt the ulceration was caused by the irritation of the beads and the pneumonia was consequent on the ulceration.

A small smooth body, especially if it be heavy, is more prone to descend into one of the bronchial tubes than an uneven light body, which is likely to remain in the trachea. The tendency of the body to pass into the right bronchus rather than the left has generally been ascribed to the fact that the

[3] Brit. Med. Jour., vol. ii. 1887.
[4] Ibid., June 11th, 1887.
[5] Texas Medical Journal, 1890.
[6] Transactions of the Medical and Chirurgical Society of Nov. 13th, 1821.

septum at the bifurcation is somewhat to the left of the middle line. Dr. Alby of Rome has demonstrated that the right bronchus more closely follows the line of the trachea than the left. It is probable that foreign bodies find their way into the left bronchus much more often than is generally supposed. There appears to be a good deal of difference of opinion amongst the compilers of statistics as to which bronchus has the preference. When a foreign body enters one of the bronchi the symptoms produced must vary with its size, position and character. Thus if it completely blocks the main bronchus the proper respiratory sounds are absent. If it partially obstructs the bronchus a loud musical sound is likely to be heard, with diminished breathing in the lung of the affected side. There are generally pain and cough, with perhaps some blood-tinged expectoration. The affected side is at first resonant on percussion. If the body is impacted in one of the secondary divisions only a limited area of the lung will at first be affected.

In the case of an adult under my care a small brooch was impacted for some weeks in the larynx, with the usual symptoms. Suddenly during an attack of coughing it changed its position and became impacted in the right bronchus. Air entered the left lung more freely than the right, no musical rhonchus could be detected, and the patient had occasional fits of coughing, which were followed by slight dyspnœa and some expectoration tinged with blood. He was inverted and

FIG. 6.

shaken, and shortly afterwards the brooch was ejected with considerable force, when all the symptoms disappeared. I mention this case because the brooch was seen by Dr. Semon with the laryngoscope in the larynx, and after the change of symptoms it was no longer visible and the larynx became normal in appearance and the voice returned. There can be no doubt that it got into the right bronchus, and yet the signs were not very marked except that the patient had severe pain about the junction of the third rib with its cartilage. The brooch would have been removed whilst it was in the larynx by an incision in the crico-thyroid membrane if the man had not objected to the operation, and it was not thought advisable to attempt the extraction of such a body by the endo-laryngeal forceps.

If a foreign body remains impacted in a bronchus inflammatory symptoms generally supervene, which may be localised or general. The results are very variable and best illustrated by a few examples. Both bronchi can be easily explored from a low incision in the trachea, and many cases are on record where various substances have been thus removed successfully in children, and much ingenuity has been exercised to meet the mechanical difficulties in particular instances. Dr. Waxham removed a hairpin from the right bronchus of a boy aged ten years four months after the accident. Mr. Bryant removed the mouthpiece of a toy trumpet from the left bronchus of a boy aged seven years eighteen days after it had been swallowed. Mr. Godlee removed a portion of a tracheotomy tube from the right bronchus of a child aged three years and a half which had been impacted for two days. Mr. T. Smith removed a metal pencil-cap from the extreme end of the left bronchus of a girl nine years old. The body was removed eleven days after the accident. There were signs of collapse of the left lung with retraction of the thorax and upward displacement of the stomach. Many other successful cases might be enumerated. Death may result both after the removal by operation and after its spontaneous ejection. Dr. Theodore Kocher reported the case of a child aged four years who had inspired a little metal tube, which was localised in the right bronchus. After tracheotomy extraction was effected with forceps. The patient improved at first, but died some weeks later from pneumonia and cerebral abscess. In several recorded cases where an unsuccessful search has been made the tracheotomy wound has been left open and the body ejected at a later period. When an abscess forms in the lung recovery is very rare.

Case 57.—A boy aged nine years was brought to St. Thomas's Hospital on Dec. 29th, 1880, in an insensible and asphyxiated condition. He had been seized suddenly with difficulty of breathing whilst eating chestnuts. I performed tracheotomy in the casualty room, cutting straight into the trachea, so urgent was the condition. Very free dark hæmorrhage occurred, but no relief was afforded until a female catheter was passed down the trachea, when a portion of a chestnut was dislodged, which shot past the tracheal opening into the larynx. It was easily extracted with forceps, the bleeding ceased, air at once entered freely, and with artificial respiration the boy came round. The next day the respiration was hurried and signs of deficient aeration of the upper part of the right lung were manifest. Inversion under chloroform was tried, the tube was removed and the tracheotomy wound was kept open by suturing the edges of the trachea to the skin and fastening the ends of these sutures together behind the neck. The remaining portion of the chestnut was never found, but a gangrenous abscess formed in the lung. The boy was for a long time very ill, suffering from hectic temperature, profuse sweats and horribly offensive expectoration. A well-marked cavity formed, yet he ultimately recovered, and when last seen, twelve years after the accident, he had grown into a fine strong man.

Dr. Good[7] relates the case of a girl aged five years who on Aug. 16th, 1890, was seized with a sudden fit of coughing whilst out walking and told her parents she had swallowed a barley hull. On the 18th she was brought to Dr. Good. She had pain in her side and a temperature of 100° F. On the 30th a swelling was noticed about three inches below the right axilla. This was incised on Sept. 6th. On the 8th the temperature was 104° and the breath was very offensive. The incision was enlarged, when several ounces of extremely offensive pus and a feathery-looking object escaped. This proved to be an ear of rye grass. A good deal of purulent expectoration and cough continued until Sept. 26th, when the child was practically convalescent. Seay[8] reports the case of an infant aged one year and three months suffering from right-sided empyema. The child had swallowed a piece of grass five months previously and had a severe fit of coughing at the time. On opening the empyema the piece of grass made its appearance. The grass had beard and stem each an inch in length. The child made a good recovery. The usual mode of death from obstruction of the bronchus by a foreign body is pneumonia, with abscess or gangrene. How rapidly abscesses of the lung may ensue is well shown by a case reported by Dr. Hadden in vol. xxxvi. of the Transactions of the Pathological Society. On Sept. 23rd, 1884, a puff dart was sucked into the left bronchus and remained fixed there. On Oct. 3rd the lower half of the left lung was solid. On the 14th the whole of the left lung was solid and signs of cavities were noted. Death occurred on Oct. 25th and at the post-mortem examination the dart was found with its large end filling the end of the left bronchus. The whole of the lower lobe of the left lung was grey and solid, containing numerous cavities filled with puriform fluid; the upper part of the lung showed patches of lobular pneumonia. Death may, however, take place quite suddenly from the body getting displaced from the obstructed to the sound side. Dr. Mackey[9] of Brighton relates the case of a child aged three years who was admitted to hospital suffering from pneumonia of the right lung and a history of having swallowed part of a plum-stone four months previously. The child died suddenly soon after its admission. At the post-mortem examination the portion of plum-stone was found in the second division of the left bronchus, which, with the tissue of that lung, was not much altered. The tubes of the right lung were full of pus. The stone must have changed position and thus caused sudden death.

FIG. 7.

(To be continued.)

[7] St. Bartholomew's Hospital Reports, vol. xxvii.
[8] Gaillard's Medical Annual, October, 1886.
[9] Brit. Med. Jour. of 1890.

LLOYD COTTAGE HOSPITAL, BRIDLINGTON.—On Monday last the foundation stone of a new wing to this hospital was laid by Colonel Lloyd-Greame. The cost of the addition is to be £776.

AN ANALYSIS OF ONE HUNDRED CASES OF MYCETOMA.

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[DR. RUBERT BOYCE (University College, London) writes: The following paper in a more extensive form was sent to me by Dr. Keith, in charge of the Civil Hospital in Hyderabad, Sind, and I am responsible for shortening it and for making certain other very slight alterations. As the paper, owing to the large amount of material analysed, throws a considerable amount of light upon many points in the history of mycetoma, it cannot, I think, fail to be of great service to the increasing number of workers who are now occupying themselves with the very important diseases of India.]

Much has already been written upon the subject of mycetoma. Carter discovered its parasitic nature; Lewis and Cunningham, in an analysis of several cases, were not convinced of this; recently Kanthack has tried to prove the actinomycetic nature of the parasitic fungus, a view which Carter himself had already become inclined to adopt; and still more recently Boyce and Surveyor have brought forward evidence which shows that there are marked differences between the fungi of the black and white varieties of mycetoma. As, however, further clinical knowledge on the subject is a desideratum, I have collected the following notes from the Hyderabad Civil Hospital registers of the past ten years and, combined with my own notes and experience, now publish them with the view that they may, to some extent at least, help investigation into the etiology and pathology of this disease.

SUMMARY OF ANALYSIS OF THE 100 CASES.

Caste.—In Sind the proportion of Mohammedans to Hindus suffering from this disease is about 86 per cent. of the former to 14 per cent. of the latter. It must be noted, however, that the Mohammedans form the greater bulk of the agricultural population in Sind, and as the disease is prevalent only in rural districts—as is evident from the fact that not one of the patients is reported as being resident in a town—one must naturally expect to find this seeming disproportion between these two main divisions of caste in Sind. As a matter of fact people of all denominations and of every status in life would be equally liable to contract the disease were they exposed to the exciting cause, whatever that may be, under the same circumstances as those in which the Sindhi Mohammedan ryot exists every day of his life. It would appear, therefore, that the disease is essentially one of the country and not of the town—that is, so far as one can trace the occurrence of the primary lesion—and affects only those whose calling requires them to be out of doors. Cultivators and their wives are hence very liable to this affection.

Sex.—As regards sex, of the total of the 100 cases examined 8 only were females, and of these 6 were Mohammedans, all wives of cultivators, and 2 Hindus, one of whom was the wife of a cultivator, the occupation of the other not being recorded. There was no difference noted in the nature of the tumour in females from that observed in males, and also the history of the cases, where such could be obtained, bore the same analogy to that of males, especially with reference to causation.

Age.—The limits of age range between twelve and eighty years, and, reckoned in decennial periods, the range between twenty and forty years gives the highest number of cases, as is shown in the figures given below. This point is, perhaps, of importance, as indicating that the cause of the disease is generated from some source or sources beyond the sphere of home life to which the very young and the very old are confined, and this remark, it may be noted, is equally true with reference to sex.

The number of cases of patients suffering from mycetoma at various ages, given in decennial periods, was as follows: Between the ages of ten and twenty, 40; from twenty-one to thirty years of age, 35; from thirty-one to forty years of age, 15; from forty-one to fifty years of age, 7; from fifty-one to sixty years of age, 2; from sixty-one to seventy years, 1; and from seventy-one to eighty years, 1.

Occupation.—As already noted above, both sex and age indicate that the disease is not found n individuals engaged in occupations other than those in the open air. It is also not observed in town residents. The information obtained from the record of the cases confirms this idea. As many as 91 per cent. of them occurred amongst tillers of the soil and the remaining ones amongst those whose means of livelihood are dependent on work in the open country—e.g., the shepherd and the boatman, or those who are led by force of circumstances at some time or other of their life to travel across rural districts—e.g., the Hindu mendicant and the Mohammedan fakir. Amongst the workers in the open air may also be mentioned the grain and cloth merchants. Dr. Carter states as worthy of note the case of a potter whose right hand was affected and suggests that potters work largely in wet earth with their hands. In one of my cases, that of a potter, the disease had attacked the middle of the sole of the left foot, probably for the same reason.

The part affected.—Hitherto all observers have noticed the disease as having attacked either the foot or hand, or both these extremities at the same time in the same individual, but, as far as I am aware, no cases have as yet been recorded of any part of the trunk being the seat of this affection. The term "Madura foot" applied to the disease is certainly a misnomer, as Dr. Carter states, since the disease is also found to attack the hands, and this remark now becomes doubly significant from the fact of the disease having attacked in two of my cases the region of the right shoulder-blade and the right sacro-iliac joint, the affection in both instances being exceedingly well marked and leaving no doubt as to the nature of the growth. Both cases were of the black variety. These peculiar situations of the disease are worth noticing with reference to its etiology. Of the 100 cases collected by me, in three only had the malady attacked the hand, the left hand being involved in all three, and in two the leg, of which one occurred in the right and the other in the left leg. The remaining cases, excluding the two quoted above in which the trunk was affected, were foot cases, of which forty-one were cases of the right foot and forty-nine of the left. In three of the foot cases the side affected was not noted. Dr. Carter observes that in his experience the right foot was oftenest affected, and adds that "I know of no *a priori* reason why the right rather than the left foot should be obnoxious to the affection, unless we suppose that it is more liable to accidental injuries, through which the spores of chionyphe might find unusual facility of entrance into the tissues of the foot." From the cases recorded above it will be seen that, if any such predilection exists, it should be in favour of the left side of the body, for, curiously enough, even the three cases of the disease affecting the upper extremity all belonged to the left hand. The probability, however, is that there is no such distinction to be observed, both sides of the body being equally liable to the affection.

Symptoms.—Generally speaking, the symptoms accompanying this disease are somewhat as follows: In the early stage, when the disease is asserted to have occurred spontaneously—i.e., without any history of such exciting conditions as a pre-existing wound, or abrasion, or sore, or as the result of an accidental injury, or the prick of a thorn—the first symptom noticed is a localised tenderness or uneasiness, followed, in the course of about a fortnight, by a local tumefaction. Subsequently there is an appearance on the spot of a nodular growth, varying in size from that of a pea to that of a small marble, with its deeper attachments diffuse and indistinct. The integument over the part affected is either normal in colour or more often, especially if the tumour has been of long duration, of a blue or purplish hue, and always more or less thickened, indurated and adherent. In course of time this nodule increases, resulting in a more or less pronounced tumefaction. This tumefaction where the foot or hand is concerned may commence on the dorsal, or the plantar, or palmar surfaces, often between the digits and sometimes in the heel. The ball of the thumb or of the great toe, or the pads of areolar tissue and fat along the bases of the fingers and toes, are favourite initial seats of the disease. The deformity resulting is influenced by the site of the underlying tendons and hard tissues. For instance, when the dorsum of the foot is first affected and the diseased mass has travelled to the roots of the toes these digits become flexed and are turned downwards, and if the sole becomes the primary seat of lesion the arch of the foot is invariably lost, the sole, or may be the whole foot, assuming a globose appearance with the toes tilted upwards. Extension of the growth into the interspaces between the digits of the hand

or foot causes these digits to be separated one from another, some being abducted, others adducted, and not unfrequently some are at the same time flexed and others extended. Where the disease begins at the heel and encroaches upon the ankle-joint a misshapen form of talipes equinus is the result. Such information is useful in guiding the knife in the course of the operation of excision and dissection. The primary origin of the disease, so far as I have been able to ascertain from the notes of the cases before me, appears to be referable at the earlier periods to the soft tissues—i.e., the subcutaneous cellular padding or the muscles together with it—and only at a later date do the hard tissues, bones, cartilages &c. become implicated; in no case, however, has the growth been found to be so superficial as to infiltrate the integument only. It must also be observed that no definite relation as to time could be ascertained between the date of occurrence of the exciting condition—whether wounds or sores or pricks of thorns &c., where such exist—and the date of the first appearance of the tumour; the earliest interval recorded in my notes is about fifteen days. Nor could I discover any relation between the size of the tumour—in other words the degree of infiltration—and the time occupied in its growth. Under varying circumstances the growth enlarges, and within a period of between a month and six months it attains a very perceptible size. Sooner or later—perhaps in a year or even in two years, and sometimes more—the tumour begins to gradually soften down here and there, and the pent-up matter evacuates itself through a sinus or several sinuses together, much in the same way as occurs in necrosis and caries or in perineal and ischio-rectal abscesses. The first indication of the appearance of a sinus externally is a nodule varying from a quarter to half an inch in size, and sometimes a bleb or blister, which soon bursts, opens and discharges a thin sero-purulent fluid, occasionally sanious, but always largely mixed with the fine black gunpowder-like bodies of the melanoid variety or the pink roe-like particles of the pale variety of the disease. The detection of these bodies at once establishes the nature of the disease. In advanced stages, extending over periods varying from two to ten or even fifteen years, the general tumefaction becomes more widespread, the number of sinuses increases and they open out in all directions, numbering sometimes as many as twenty-five or thirty, or more. These sinuses are always more or less tortuous in their course and intersect one another in many places, so that if probes are passed into them their ends can be felt to meet together at some depth in the interior of the tumour; often the cavity or cyst connected with these sinuses or tunnels may also be detected. The presence of one or more permanently discharging sinuses is not a constant feature of the tumour; sometimes a tumour may be seen which is quite dry externally and the sinus or sinuses are partially or even completely closed up. On the other hand, there may be one or more discharging sinuses without any external evidence of a tumour; such instances are rare. In all cases the part affected, whether hand or foot, or any other region of the body, becomes excessively hypertrophied and markedly globular. This globose appearance of the tumour is very characteristic, and still more so is the general appearance it assumes at its uttermost development—viz., an enormous globe of hypertrophied tissue drilled all over with holes. Acute pain is never a prominent symptom at any period of the disease, but most patients complain of a slight dull ache, which from time to time at indefinite intervals—four or five times in the course of a year—as far as I can gather from the statements made by those rude and ignorant people, the class of cultivators, tends to become slightly exaggerated. Most of the patients seek admission into the hospital when the disease is well advanced, and then not on account of pain, but because of the discomfort and uneasiness which the tumour causes by its massive size, or owing to its being situated in inconvenient positions, as when affecting the fingers and toes only, or, as in the two cases mentioned above, where the shoulder blade and the sacrum have become the seat of the affection. Another remarkable feature of the disease is the entire absence of any marked constitutional disturbance at any stage of it. The disease is entirely, in fact, a local complaint *ab initio*, and this is seen from the certain and rapid curative results which invariably attend treatment by surgical interference and the equally speedy manner in which the general health of the patient is restored to its normal state after the operation.

Diagnosis.—Sufficient has already been said to show that the finding of the black or pink particles is characteristic. With reference to guinea-worm disease I would here make a passing remark. The idea suggested itself that mycetoma might have some connexion with the history of that worm. I may state that so far as Sind is concerned it could hardly be entertained. Guinea-worm disease is not endemic in by far the greater part of Sind and it prevails only in the stagnant pools of the Thar and Parker districts. The few occasional cases seen in the Hyderabad Civil Hospital occurred amongst people who had travelled or been resident in places outside the province of Sind. In a case mistaken for guinea-worm disease, the error in diagnosis occurred because of the uncommon situation and the extent of the mycetomatous growth; it is the only case of its kind on record in this hospital. The disease extended in this case from below the knee to the ankle.

Prognosis.—To expect a spontaneous cure or a cure by remedial measures is beyond my experience; on the other hand, surgical operation, whether undertaken early or late, and regardless of age or sex or even of constitutional debility, gives exceedingly satisfactory results. In fact, it is the only means of permanent cure, provided the surgeon can ensure the successful removal of all traces of the disease in the part operated upon, otherwise the disease is liable to recur, as happened in five of my cases, two of which had been previously operated on unsuccessfully in the dispensaries in Sind In one case the tumour had been excised by a barber, and two cases were operated upon a second time in this same hospital. All these patients left the Hyderabad Civil Hospital cured. A mortality of about 2 per cent., which has been the result achieved in this hospital, speaks volumes in favour of the chances of recovery. As regards rapidity of recovery it is needless to say that prognosis is far more favourable when the disease is superficial and has attacked the soft parts only than when it is deep and has involved the hard tissues.

Remarks.—Everything points to a definite local infecting agent or agents as the cause of this disease. Local injury, such as the prick of a thorn, is a common history in the cases which I have examined. The offending thorn in the province of Sind is usually furnished by the Acacia arabica ("babul") or other species of acacia. I have recently had the opportunity of examining inflammatory foci which had formed around "babul" thorns *in situ* in the tissues; but, according to Professor Boyce, who kindly examined the tissues for me microscopically, there were no fungoid elements present. In these cases, therefore, the presence of the thorn merely caused a local irritation.

INFLUENZA IN 1893.

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THIS is the fourth year of the prevalence of influenza in this country and as I have in the three previous years placed on record my observations of the disease in this East Anglian district I venture to relate my further experience; for, although the general history and features of influenza have been very fully and learnedly dwelt upon by numerous writers and again quite recently in Dr. Parsons' recent report to the Local Government Board, I do not think that this subject is by any means exhausted. In looking back over these past four years it may be said that the disease has always shown its own distinct type and its specific individuality, and the primary seizure has varied but little, except as regards its severity; yet when a careful note is made of its complications and secondary manifestations it will be seen that they have varied so much in character and intensity in the different years that it may be said there have been different ailments to appreciate and to treat. Thus, speaking broadly, in the first year the primary fever was more severe; acute inflammations more constantly complicated the seizure; pleurisy with effusion was more frequent; neuritis and severe local neurosis were more common; whilst the bronchial affection rarely passed beyond the condition of dry sibilant rhonchus. In the second year (as in each succeeding year) pneumonia was common, but with less pleurisy, whilst a greater tendency to bronchitis with secretion showed itself. In the third year primary local neuritis had almost disappeared, but there was an increasing tendency to acute disturbance of the action of the cerebral and spinal centres,

frequently followed by secondary or peripheral nerve affections; active gastro-enteric symptoms appeared also to be increasingly frequent, and still more so in this present year, 1893. In this last year the special feature of the disease has been the still more frequent implication of the nervous system, both primarily and secondarily, without other complications, as is shown by the frequent occurrence of delirium, mental excitement or of actual mania, or by the supervention of cerebral or spinal meningeal inflammation. And, indeed, so much less severe has the initial fever, as a rule, now become, and so frequent the implication chiefly of the nervous centres and their nerves, that the interest and importance of the disease (except for its pneumonic complications) have now largely centred in its nervous manifestations. In all these years abiding debility has been a frequent and special feature; but it has certainly been less general in the last two years than at first, although, on the other hand, more definite nervous affections have been even more common. The question has been raised whether these later manifestations of disease can properly be considered as being really sequelæ in the same sense that phthisis following influenza would be a sequela. Doubtless the influenza poison chiefly affects the nervous system and has been always present from the first; yet its primary effects have often differed greatly from those manifested at later periods, and, moreover, such later phenomena do not follow in a very large proportion of cases. Although, therefore, the word "sequela" may be theoretically inexact, yet, as after diphtheria, it does seem to express well the conditions frequently met with, especially where, as is often the case, a considerable interval of quiescence, or almost of health, has occurred. The word has the sanction, too, of many former eminent writers and observers. It is remarkable that these secondary nervous affections have now, as previously, borne no necessary relation to the severity of the primary attack. Dr. Copland[1] uses the word "sequelæ," and he says that "the severity or danger of these had frequently no relation to the violence of the epidemic seizure, for the consequent affections were often most serious in persons who had experienced a comparatively mild attack of influenza, and as frequently slight in those who were severely attacked"; and the same statement might now be repeated.

It is a noticeable fact that in all these years the disease has subsided at the end of either the first or the second quarter, and has not reappeared in an epidemic form until the return of the cold weather in the ensuing December or January. Indeed, in 1892 the great stress of seizures was not felt until February, March and April, but it also ceased to be actively epidemic in the month of June. In the present year scattered cases have continued to occur until the present time, but there is no general prevalence, and there can be no doubt that thermometric or atmospheric conditions—favourable or unfavourable to the life and multiplication of the bacilli—have existed at these periods respectively.

Although this district, in common with England generally, has been almost entirely spared, the coincidence of the reappearance of Asiatic cholera in Europe during the last two years should not be overlooked in connexion with this outbreak of influenza, corresponding as it does with what has been observed after other invasions of this disease.

During the last week of January and the greater part of February of this year a very extended special epidemic occurred, which was characterised by a considerable and marked *soreness of the throat*, with faucial redness and relaxation. There were also with this usually some catarrh of the eyes and nose and some bronchial secretion. Debility and lassitude, both at the time and afterwards, were also marked symptoms. In the latter part of February true influenza began to show itself in an epidemic form. The attacks of this disease were markedly contrasted with the catarrho-cynanchal seizures which had been so prevalent previously, and it is remarkable that these latter forms of illness disappeared almost suddenly at the time that true influenza reassumed its epidemic condition.

As in former years, the great majority of the cases of influenza were quite uncomplicated; but on the other hand a considerable proportion were accompanied or followed by active complications or by sequelæ. Pneumonia, as in all the years, has been the most common complication as well as the most fatal. There is no doubt that it has often been induced by want of due care or by undue exposure during an attack of simple influenza.[2] Though somewhat less frequent this year than previously, yet in three or four districts of Norfolk it has prevailed largely and quite endemically. One country medical practitioner reported that he must have had in his district at least 100 cases of pneumonia during this spring; another stated that he had had more than sixty cases; and another said that a large proportion of the children in the Union house to which he was attached as medical attendant had suffered from pulmonary inflammation.

Pleurisy and pericarditis have this year been comparatively rare. Phlebitis, usually of the femoral vein, has occurred occasionally. Albuminuria of varying duration would appear to have been increasingly frequent and readily recurred during convalescence through imprudence or exposure. Fluxes, such as diarrhœa and vomiting, have often been severe. Catarrh of the bladder has been very occasionally met with. Delirium, mental confusion and attacks of acute mania have been by no means rare; whilst acute or subacute cerebral and spinal meningitis have been not uncommon.

The temperature of affected persons has shown some curious variations. As a rule it has after the first three or four days become normal or subnormal; but a few cases have occurred in which, without evident cause, an increased range of the thermometer has continued for three or four weeks or even more; and in one case it was noticed that the morning temperature was for a time from one and a half to two degrees higher than that of the evening. In some others, where it was persistently high, there was a morning remission of two or three degrees, giving rise to the suspicion of an attack of typhoid fever being impending.

Of later or secondary affections a varying amount of loss of taste or smell has been very frequently noted; and in connexion with this I may mention a marked and prolonged desquamation of the mucous membrane of the soft palate which was observed in one case, in which there was also distinct peeling of the skin of the feet. The vesicular eruption on the fauces described by Dr. Shelly[3] as being extremely common in influenza has not been so quite so constantly observed by myself, though undoubtedly often present, and in some cases even diagnostic. One of the most frequent and remarkable neuroses observed with or without general neurasthenia or weakness of the limbs has been a peculiar chronic affection of portions of the spinal column, in the form of persistent tenderness of some of the vertebræ, most commonly of the cervical and dorsal regions. Presumably the poison of the disease had especially affected these particular localities, and the resulting asthenic congestion of the cord or its membranes was very slow to disappear, although the patients as a rule eventually recovered. A few cases, however, have been met with where the patients did not so recover, but the disease went on to produce greater limb weakness or even abiding partial paraplegia. This unfavourable result appeared to have occurred where an attack of influenza in a second year accentuated or increased a spinal weakness already existing from a former seizure. In these cases the lower cervical spines and the fourth or fifth dorsal vertebræ were the most common seats of this abiding tenderness, and it was observed not infrequently that two or more regions of the spinal column would be thus affected, with distinct intervals of normal spine between them. In these cases, too, there has usually been a certain amount of fixed pain in some portion of the sternal region, corresponding with the peripheral termination of the nerves arising from these particular parts. The spinal pain was usually accompanied by marked tenderness on pressure and by some hyperæsthesia of the adjacent skin, and the whole condition has sometimes borne a striking resemblance to that seen in cases of spinal hysteria; but the age and sex of many of the patients, as well as other circumstances, quite negatived the idea of its being due to such a neurosis.

As a proof of changing type, it is worthy of notice how much less alcoholic stimulants have been required, or even borne, in the last two years than previously. At first it often appeared that champagne or brandy could be taken, and with advantage, in almost any quantity; but recently it has been

[1] Dictionary of Medicine, 1858.

[2] My own attack of influenzal pneumonia last year was distinctly induced by such exposure, when I was otherwise comparatively slightly ailing; and the lamented deaths of two healthy and most respected medical practitioners of this district in the spring of this year from pneumonia were clearly traceable to their courageous ignoring of their own needs in their steady devotion to their duties and the proper care of those patients who were under their charge.

[3] Brit. Med. Jour., vol. i. 1893, p. 791.

a common complaint of patients that all forms of such stimulant have produced flushings or headaches or general discomfort.

Public institutions have, as a rule, been but little affected this year, so far as patients or general inmates are concerned, but the officers and servants have in some case suffered to a certain extent. In a few districts, however, the public schools have suffered more extensively.

Upon the whole, the disease may now be considered to have lost much of its initial intensity and it is probably dying out. This may be due to changing seasons or possibly to a partial protective influence upon the population exerted by previous attacks or by previous exposure and acclimatisation; but this protection has been clearly shown to have been only partial both as regards individuals and communities.

St. Giles's-street, Norwich.

A FURTHER REPORT ON

THE COMPLETE ABANDONMENT OF THE CUTTING OPERATIONS,

FOR REMOVING CALCULI ENTIRE FROM THE BLADDER, AND THE METHODS EMPLOYED INSTEAD IN THE CIVIL HOSPITAL, HYDERABAD, SIND,

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IT will be seen from a perusal of my paper on the complete abandonment of the operation for removing calculi entire from the bladder and the methods employed instead that my principal aim was, not only to extend the sphere of lithotrity and bring within its range much larger stones than it then embraced, but also to reduce as much as lay in my power the size of the wound and to place it in such a position that, without interfering with the structures or functions of the bladder or prostate gland, stones which were ineligible for urethral lithotrity might through it be removed by perineal lithotrity. In order to have my methods for abandoning the cutting operations clearly before the mind of the reader, it will not be out of place here to review the circumstances which first gave origin to the idea, and then to trace the various steps which have been taken towards its realisation.

A case of incontinence of urine and disorganisation of the anterior structures of the vaginal wall in a young girl, the result of the removal of a calculus by the cutting method, produced such a profound impression on my mind that I determined for ever to abandon, if possible, the cutting operation in the female. Notwithstanding the bugbear about the non-retention of fluid in the bladder or during the operation in the female and the danger to the mucous membrane likely to result therefrom, lithotrity in the female (or in the male) seemed to me to be the only operation yet invented (or likely to be so) for removing calculi from the bladder and at the same time preserving its structures and functions unimpaired. The complete contrast between the two operations had always a peculiar fascination for me; for if the theory of lithotrity could be realised in the practice of the operation stone in the bladder would be for ever divested of all its terrors. There was some art even in the idea of removing a stone from the bladder without in any way interfering with either its structures or functions; but there was certainly very little in the idea of making in it a wound large enough to extract the calculus by means of forceps. Although I began the operation in the female under rather adverse circumstances—viz., with inferior instruments and patients suffering from irritability of the bladder, with fetid urine—all my operations were attended with the best results. The phantom of danger to the mucous membrane from the absence during the operation of fluid in the bladder disappeared at once when submitted to the crucial tests of practical experience. Furnished with a complete set of lithotrity instruments I have with equal ease and success now performed the operation on patients of all ages and both sexes without even the appearance of blood in the auxiliary fluid, which shows that the first and most delicate structure—the lining mucous membrane—of the bladder is left intact.

From the shortness, roominess and dilatability of the female urethra the range of lithotrity in them, it was clear, could be limited only by the largest instruments available, whereas in males, on account of the variability in the size of the urethral canal, the sphere of lithotrity was circumscribed not by the largest instruments available but by the variations in the size of the urethra. Sometimes the male urethra was so small that it would only admit of a No. 10, whilst the diameter of the stone was too large for the male screw of this lithotrite. There was then no alternative but that of removing the stone entire by some of the cutting operations. How, then, could this obstacle to the extension of the sphere of lithotrity in the male be removed? By slitting up the membranous, and entering the urethra at the prostatic, portion where, like that of the female, it is short and roomy. The bugbear about the danger to the mucous membrane from the non-retention of the auxiliary fluid during the operation having disappeared my first method—perineal lithotrity—thus comes in and advances lithotrity in the male to the same point as that in the female, which is limited by the largest instruments available. The results of this operation, as will be seen in the sequel, have been almost as brilliant as lithotrity in the female, and at the same time it preserves the structures and functions of the prostate gland unimpaired. With a complete set of lithotrity instruments I have performed perineal lithotrity with equal success on patients of all ages—from the child at the breast to the old man at the other extreme of life. This is the first step in advance of the methods for removing calculi entire from the bladder practised by the profession when urethral lithotrity is inadmissible owing to the narrowness of the urethra. The second soon followed.

We have now in male and female alike advanced lithotrity to limits circumscribed by the largest instruments available. The largest lithotrite in Bigelow's case locks on stones a little over one inch and a half in diameter; but many cases of stone are admitted into hospital with diameters which are much larger than this instrument can embrace. Seeing the ease with which the largest lithotrites traversed the urethra of the female and the prostatic portion of the male after slitting up of the membranous part, and being thoroughly convinced in my own mind that lithotrites of much larger size could be readily introduced into the bladder of both sexes, and that thus much larger stones could be brought within the sphere of lithotrity, causing a corresponding abandonment of the cutting operations for removing calculi entire from the bladder, I sent a description of the new kind of instrument I wanted to Messrs. Coxeter and Son and afterwards found that this new lithotrite answered my purpose in every way. It was a bold, massive, compact and highly finished instrument, the peculiarities of which were its length of male screw (embracing calculi of two inches and a half in diameter) and its long and massive jaws. I had not long to wait before its merits were put to the test, and to my great satisfaction I found that it was as sensitive and easily handled as any of my smaller lithotrites. For breaking up calculi in the first instance this lithotrite is a complete success; and I find that by its use I can remove large calculi with almost as much safety to the patient as I can do smaller stones, with this difference, that the patient is much longer under the influence of chloroform. The small wound in the perineum is of little consequence, as will be seen in the sequel. The origin of these methods was thus far the outcome of deliberation alone—the one idea following the other by natural sequence; but the next method came to me by pure accident, and although in itself it was seemingly insignificant, and although I did not at first recognise its importance, it has yet been as influential as the others in developing the central idea of abandoning the removal of calculi entire by the cutting methods and in enlarging the sphere of lithotrity in both male and female. Its origin and progress were related in the Indian *Medical Record* of February, 1892, and I will now recapitulate its chief points. It was the case of a female with a large stone in the bladder, and my perineal lithotrite was being repaired. She was placed under the influence of chloroform and on introducing the largest lithotrite in my possession and seizing the stone I found that the male screw was completely outside the box of the lithotrite; and in the absence of my perineal lithotrite the only alternative was to perform some of the cutting operations. Whilst I was thus standing helplessly looking at the screw of the lithotrite and wondering which operation I should perform, whether supra-pubic or vaginal, and thinking over the enormous wound which in either case would have to be made in the walls of the bladder, the idea suddenly occurred to me to strike the lithotrite on the top with a hammer and endeavour to bring the screws together in this way. The idea was at once adopted and put into

execution. The hammer was applied and, the two screws (male and female) of the lithotrite being immediately brought together, the stone was crushed, and so with the other fragments which were too large for the male screw of the lithotrite the hammer was applied whenever it was necessary to bring the screws together, and the stone was thus successfully removed. When I visited the patient next morning she was sitting in bed having her breakfast, which consisted of "bajree" bread with the flesh of the goat. She was, she said, quite well, had passed urine freely, and the functions of the bladder were unimpaired. The stone was a soft one and weighed about one ounce and a half. Since the publication of this case I have had many opportunities of putting this expedient to the test; but the salient points of a case operated upon in the month of October, 1892, will be additional proof in its favour and will also point out how far I have successfully extended the sphere of urethral lithotrity. Amongst Beloochees the penis and the urethral canal are sometimes largely developed, so much so that I have often been able to introduce my large perineal lithotrite with ease and break up large calculi in the first instance with it. Some of them, rather than face a cutting operation, will nurse their calculi until they have reached a very large size. The Belooch in the present instance was sounded and the stone was found to be of an unusually large size. On being told that it could only be removed by perineal lithotrity he replied that unless I could remove it without cutting of any kind he would gain credit for the virtue of carrying the only real affliction he ever had in his life to the grave with him. He took chloroform on the condition that I would not touch him with a knife. My perineal lithotrite traversed the urethra with the greatest ease; but on seizing the stone the whole of the male screw appeared outside the box of the lithotrite. This was a case which settled once for all the value of this expedient. A few gentle blows of the hammer brought the screws together immediately and the stone was broken up in the first instance in this way, and it was successfully removed by a No. 20 evacuating catheter. The stone weighed four and a half ounces. This may seem to be a very heroic procedure, but it really is not so. Stones of this size are as a general rule soft—at least, the outer crust is often so—and a few gentle taps with the hammer are quite sufficient to break through the crust and bring the screws together. The first time I had recourse to this expedient I began with quite an unnecessary amount of force. This is the largest stone I have ever removed per urethram and the operation was performed by combining the use of my perineal lithotrite with the expedient of striking it on the top so as to bring the screws together. Thus far I have now extended the sphere of lithotrity, and with the extension of the domain of lithotrity there is the corresponding abandonment of the cutting methods, or, which is the same thing, of the operations for removing calculi entire from the bladder.

The lithotome.—I wish, before concluding this section of my paper on the removal of stones per urethram, to supplement it by giving the details of an instrument which I have devised for cutting stones whose density resists all efforts of the lithotrite to crush. The instrument was first suggested by a case which was admitted into hospital on June 3rd, 1892. The patient was a Hindoo Cutchee from Thur and Parkur, aged about forty, with all the symptoms of stone. He was placed under the influence of chloroform and the stone was seized, but no power in my possession could make any impression on it, and I had no alternative but to perform lithotomy. It was a flat reddish-grey calculus of the uric-acid variety, weighing two ounces and a half. Hitherto I had had to contend with the bulk of the stone, but at this time I was face to face with the density and toughness of it, qualities which must also be taken into consideration if the doctrine of the complete abandonment of all the cutting methods for removing the stone entire is to be held in its entirety. If the stone could not be crushed there was only one other way of disposing of it—viz., to cut or split it. The only instrument a stone can be split with is a wedge, and a wedge is not "pushed home" into the stone by a screw, but is done so with a hammer. Here the outline of the instrument which I wanted was already in my mind's eye. The male jaw could be converted into a wedge or a couple or more of small sharp wedges with indentations between; and the male stem or shaft of the lithotrite could be made entire with a knob at the end to accommodate the hammer when striking. As I already had ample experience of the effect of striking the top of the lithotrite with the hammer, I was so confident that this new contrivance would be a success that I sent a full description of the kind of instrument I wanted to the surgical instrument makers and ordered two of them of different sizes. I have now used one of these instruments five times and I have succeeded in cutting up stones in the first instance which resisted all efforts of the lithotrite to crush; but the case to be related seemed at first to defy all efforts of the lithotome to cut. It was that of a young Mussulman about thirty years of age from the Belooch hills, who was admitted into hospital on Aug. 4th last suffering from all the symptoms of stone in the bladder, which he had had for the previous four years. He was tall, of slight build, and was otherwise in perfect health. Under the influence of chloroform, as his urethra was a roomy one, a No. 16 lithotrite was introduced and the stone was seized. The male screw at first appeared all outside the box of the lithotrite, but by quitting my hold and seizing the stone at other points I at last succeeded in locking the instrument; but the resistance was at once so complete and decided that I at first thought there must be something wrong with the screws. I unlocked them and quitted my hold of the stone, but finding that the instrument was in perfect order I again seized it and locked the screws, but the resistance was found to be as decided as before and I could make no impression on the stone. Withdrawing this instrument I introduced my perineal lithotrite and again seized the stone, but all my efforts to make any impression on the calculus proved to be abortive. Tapping the stone, it gave out a clear ringing sound like flint. I had not met with anything resembling it since the case referred to above, which first suggested the invention of the lithotome, which was now resorted to as the only resource left in the development of the art of reducing the stone to débris. I was now face to face with the reality that the stone or the patient must be cut. The necessary precautions having been taken—viz., to place the patient profoundly under the influence of chloroform and to keep the bladder as full of fluid as possible—the lithotome was introduced and the stone was seized. The lithotome with the stone in its jaws was then held as nearly as could be judged in the centre of the bladder, in order to be as distant as possible from the hard parts of the pelvis and to neutralise as much as possible the vibrations of the blows by the fluid, and the hammer was applied. The force of the blows was at first such as I had formerly been in the habit of administering, but they only had the effect of sending the shaft home about the eighth of an inch. The screw being as before firmly tightened against the node, the hammer was again applied; but although the blows were increased to the greatest force I could apply to such a small point the staff remained in exactly the same place. After a short rest on again applying the hammer the knob at the end of the shaft was smashed in two and flew away in different directions, leaving bare the point of the shaft with the little screw on it to which the knob was attached. The space for the accommodation of the hammer, which had been very small before, was now reduced to a mere point. I continued to strike that, however, and at last the shaft yielded and a few gentle blows sent it completely home. But even for the second, third and fourth times the stone was seized and cut the resistance was so violent that I thought that possibly, after all, I would have to resort to the old methods; but I nevertheless persevered and in about ten seizures the fragments could be broken by the slightest taps. The lithotome was then withdrawn, and the operation was finished with the greatest ease by the No. 16 lithotrite. The débris in large square particles, making a rattling noise as they dropped into the basin, was evacuated by a No. 18 catheter; it is remarkable that there was no finely divided sand or mud amongst its particles. It is a mistake, therefore, to suppose that the débris must be reduced to finely divided sand or mud before it can be evacuated without the aid of the aspirator. The débris had almost the appearance of coal when first evacuated, but it assumed a greyish hue on drying. It weighed over two and a half ounces when dry. This was the hardest stone I ever had to deal with—fortunately they are very rare. The other four calculi which were cut by the lithotome were so red in colour that during the evacuation of the débris it seemed as if blood were mixed with the auxiliary fluid, and they were composed of coarse particles mixed with a good deal of mud, but when the débris was dried it turned to a fawn colour. They were not, however, nearly so hard as the one in the case which has just been described. I operated on the patient in the early morning (the operation lasting about 100 minutes) and in the afternoon when I returned

to hospital I found the patient sitting up in bed eating curry and rice. I was very much surprised to see him so far recovered. The pulse was about 90 per minute, the temperature was normal, and the urine was passed freely and without any inconvenience. Next morning, although he had passed a good night, he vomited some milk he had taken, felt sick, and he had a disinclination for food, with a slight pain diffused over the abdomen. The pulse was about 100 per minute and slightly irregular in volume; the temperature was about 100° F.; the tongue was clean and moist, and the skin was cool and moist with perspiration; the urine was passed freely. He felt great languor and drowsiness and disinclination to move. A mustard poultice was immediately applied over the abdomen; ice was given to suck, and his food and drink were iced for him. He passed the day eating and drinking small quantities at a time and sleeping in the intervals. In the evening he felt much better, but still complained of great languor and drowsiness. The second morning after the operation he was better in every way; the urine was passed freely. On the third day his brothers were no longer anxious about him, as his appetite had returned and he complained only of pain in the joints. All his bladder troubles had vanished.

Having thus pointed out the various steps which have been taken towards the realisation of the idea of extending the sphere of urethral lithotrity, with the corresponding abandonment of the cutting operations; having traced the various methods which have been employed in contending with and overcoming the physical difficulties of bulk and density that lay in the way; and having related the salient points of cases illustrative of the successful extension of bulk to four ounces and a half and of density to the hardest of urates and oxalates: I now proceed to record the principal features of a case of stone the removal of which by my perineal method extends the domain of lithotrity to calculi weighing seven ounces and a half, and at the same time it shows the nature, extent and position of the wound through which this large stone was evacuated.

A Mussulman about eighteen years of age was admitted into hospital on March 9th of this year with all the symptoms of stone in the bladder, from which he had been suffering for the previous three years. He was almost reduced to a skeleton; his ribs were prominent and his abdomen was so much sunken that the impulses of the aortic artery could be seen in its walls. His organs seemed, however, to be healthy, with the exception of the spleen, the outline of which could be seen midway between the costal margin and the mesial line. His pulse was soft, compressible and about 90 per minute; the temperature was normal, and the appetite was fairly good. He looked altogether as if he had been suffering from starvation, and his voice was a falsetto. Micturition had become so frequent and painful that he had no proper rest by day or night. Aided by the emaciated condition of the parts bimanual palpation discovered a stone of unusually large size which was settled well down on the rectum behind the prostate. When asked why he had delayed so long in coming to hospital he replied that he was afraid of a cutting operation, and he had now come as he had heard that cutting had been abandoned for the crushing method. Several consultations were held as to the advisability of performing an operation on him at all, and the opinion prevailed that from any surgical interference an unfavourable result could only be anticipated on account of his reduced state of health. Owing to the frequent appeals of the patient, whose life had become a burden to him, with confidence in my own methods, and seeing that this operation would be a test as to how far the limits of lithotrity could be pushed, I determined to risk it. The patient was placed under the influence of chloroform and it was found that the largest lithotrite that could be readily introduced into the urethra was a No. 10; the idea, therefore, of performing urethral lithotrity could not be entertained. I accordingly introduced the staff and proceeded to perform my own operation—perineal lithotrity. An incision capable of admitting a small director was made with the tenotomy knife (both belonging to the pocket case) through the perineum directly into the membranous portion of the urethra. The director was introduced through the small wound into the groove of the staff and then slipped along it into the bladder. As urine escaped and the stone was felt by the director the staff was withdrawn. With a series of sounds in my possession, ranging from the smallest to the largest, I then proceeded to dilate the wound until it was large enough to admit my perineal lithotrite. (It will be observed here parenthetically that the dilatation of the wound is a slight modification of the plan which was described in my first paper and that it is confined to the skin and membranous portion at the furthest, never being applied to the prostate gland, which requires no dilatation for the introduction even of the largest instruments.) The blood arising from a small wound like this in such a position is very insignificant and may be left entirely out of consideration. When the wound was large enough the lithotrite was introduced and the stone was seized, but the whole of the male screw was found to be outside the box of the lithotrite and by applying a measure it was calculated that the part of the stone seized would be over three inches in diameter. A few gentle taps of the hammer on the top of the lithotrite brought the screws together immediately and the stone was then crushed by the screw, no violence or force of any kind being required. Whenever the male screw appeared beyond the female screw they were brought together by gentle taps of the hammer, and then the screw was locked and applied; for when the stone is a very soft one—as most of these large concretions are—and when the jaws of a smaller instrument can firmly seize and hold the fragments (the hammer being, if necessary, applied as easily to a small as to a large instrument) it is well to work with as small an instrument as is possible. After removing three ounces of débris from the bladder in this way the operation was stopped, as he had been under the influence of chloroform for two hours, and the probable result of the further prolongation of the anæsthetic caused me considerable uneasiness. On the next day he complained of the taste of the anæsthetic in his mouth and of a nauseous feeling which blunted his appetite; but there was no vomiting, no rise of temperature in the rectum or quickening of the pulse. There was no pain or irritability of the bladder beyond what he had previously suffered from. The urine was passed freely and as a voluntary act by both wound and penis, and the bedclothes remained dry. I wished him to lie quietly on his back and to pass his urine into some vessel, but he preferred getting up to pass it. The great aim, therefore, for which this operation was devised was thus far attained—viz., the preservation of the structures and function of the bladder unimpaired. On the fourth day after the operation he asked me to finish it, as he felt as fit as he was on admission; so the second part of the operation was begun. The hammer had to be frequently employed to bring the screws of the lithotrite together (as is described above) and in the course of ninety minutes four ounces of débris were successfully removed without the occurrence of any untoward incident. There was no blood lost during either of the sittings, the auxiliary fluid during the various washings-out of the bladder returning quite free from it, for my theory of lithotrity is to remove, if possible, all stones from the bladder without in any way interfering with either its structures or function. This is the great ideal I have set before my mind and how far it has been realised it is the object of this paper to lay before the profession. Now in the performance of this operation what is the leading sign that this great object is being accomplished? It is in the absence of blood during the operation. The first structure which must always be in the mind's eye is the delicate mucous membrane. When the meatus urinarius externus is opened for the reception of the heavy lithotrite and when the latter comes into contact with this delicate structure the mind is immediately awakened to the sense of the degree of dexterity and delicacy of manipulation which must be unremittingly exercised in order to ensure the integrity of the mucous membrane, and the sure sign that this indication is being fulfilled to the letter is the absence of blood during the operation. If there is no blood during the operation there need be no anxiety as to its result; for when there is no blood there are no abrasions, bruisings or lacerations of this structure, and when these are absent there can be but little shock. The evacuating catheter which was at first used was a No. 18; but as the wound during the last sitting showed a decided tendency to contract it had to be finished by a No. 12 and a No. 13 evacuating catheter.

I may mention here that I have now both in urethral and perineal lithotrity completely abandoned the use of the aspirator. The idea of applying the aspirator to the evacuation of débris from the bladder arose from a mistaken physiological conception, or, perhaps, properly speaking, no conception at all of the extent of power the bladder had in itself of evacuating débris from its cavity. The latter, however, is not considered to be sufficient to effect the evacuation of residual particles lurking amongst the corrugations of mucous

membrane behind an enlarged prostate or the neck of the bladder. Its almost universal use by the most eminent surgeons shows that it is still considered to be necessary for the thorough evacuation of débris from the bladder. Having myself now removed the débris of over 1000 calculi from the bladder without the use of an aspirator and with, so far as I am yet aware, only a single recurrence of the disease amongst all these cases, it is fully demonstrated, I think, to the profession that for the successful and thorough evacuation of débris from the bladder the aspirator is, although highly imposing, an absolutely unnecessary instrument. It not only does not aid but actually neutralises the normal expulsive energies of that organ; for by withdrawing the auxiliary fluid it removes the natural stimulus to its reflex contractile power. In the evacuation, therefore, of débris from the bladder I rely on the energy of its reflex muscular contraction, excited by a stimulus similar to the urine, instead of the extensile energy of an indiarubber bag—on a natural *vis a tergo* instead of an artificial *vis a fronte*. In old men suffering from atony of the bladder, where on account of changes in the prostate gland the power of emptying itself is partially lost, when all obstruction is removed by the introduction of the catheter its contractile energy is sufficient to expel the débris and even with force. I recently performed urethral lithotrity on a case where, on account of impacted calculi, retention, prolonged for ten days, had caused atony with, for the time, complete loss of the power of emptying the bladder. The fluid, together with the débris, was easily evacuated in this case by pressure of the hand over the epigastrium. The bladder had to be emptied by the catheter for several days after the operation until its normal tone was restored; but during the many times the catheter was introduced, the urine withdrawn and the bladder washed out no residual débris was detected. Such are the cases, however, where theoretically the aspirator would play its proper *rôle* in the evacuation of débris, if it is to have one at all.

For injecting the bladder I now only use two syringes with nozzles fitting the meatus urinarius externus, with an assistant who is trained to fill them with fluid and not with air. The difficulty of keeping the auxiliary fluid at the proper temperature necessitated the abandonment of my other method which was mentioned in my first paper. When allowing the patient to wake up after the operation is finished and washing out the last particles of débris from the bladder the real nature and extent of the wound in the perineum and membranous portion of the urethra may be judged from the behaviour of the stream of the auxiliary fluid when it is injected through the wound or urethral canal into the bladder. The smallest nozzle (= No. 6 catheter or larger, according to the size of the catheter employed) of a syringe should be introduced through the wound into the bladder and two or three ounces of the fluid should be injected, or until the patient makes micturitive efforts or the bladder becomes distended, which can be readily seen in slight subjects from bulging of the epigastrium. On arresting the motion of the piston some of the fluid will return by the penis. This is almost always to be seen in children whose bladders are extremely sensitive, and very little fluid can be introduced into them before it begins to return by the penis; and this it does sometimes even during the act of injecting the bladder. If, after injecting the fluid into the bladder, the nozzle of the syringe is instantly withdrawn, the fluid may all pass, as in the first instance, by (1) the penis, (2) the penis and wound, or (3) all by the wound. Whilst washing out the portion of the urethral canal anterior to the wound (which I invariably do as a finishing detail) with a nozzle fitting as accurately as possible the meatus urinarius externus and sending a stream down the urethra in the direction of the wound and bladder the fluid flows (1) all into the bladder, which is especially to be seen in children; (2) partly into the bladder or partly escapes from the wound; or (3) it all escapes from the wound. If the fluid is retained in the bladder and micturitive efforts are excited by bimanual manipulation or by pressure over the epigastrium the fluid is passed (1) all by the penis (this is especially the case if the lithotrity position is abandoned, and the extremities are stretched out and brought together); (2) by the penis and wound (it is highly interesting to observe the two streams flowing out together); or (3) it all escapes by the wound. I lately operated upon a sickly patient about a year old for a large stone, having to use a No. 10 lithotrite; when washing out the part of the canal anterior to the wound the fluid partly escaped by the wound and partly passed into the bladder. Observing the fulness in the epigastric region I withdrew the syringe and applied pressure to the epigastrium with the view of exciting micturition, but no urine was passed; I then tried bimanual palpation with the same result, and at last I emptied the bladder by the catheter. After the operation the patient whose case has just been related for the first few micturitive acts passed his urine by both the penis and wound, and afterwards all by the penis. Children as a rule pass their urine after the operation by the penis, and old men by the wound. In an operation I lately performed on an old man, after abandoning the lithotrity position and stretching out and bringing the extremities together, it was noticed that he passed urine or fluid all by the penis. I then as an experiment injected fluid into the bladder; it all went past the wound and returned again by the penis, the wound remaining dry during both processes.

These observations on the behaviour of the stream of the auxiliary fluid or of the urine to the wound demonstrate its insignificant character and its speedy closure after the operation. Nothing could be more instructive than the phenomenon of the two streams of either the auxiliary fluid or the urine issuing simultaneously by both the penis and the wound; for this shows that the capacity of the prostatic portion of the canal is at least equal to that of both the wound and the urethra, and that the volume and pressure of the prostatic stream equal at least the volume and pressure of both streams issuing from the wound and the penis. In all cases, however,—and this is wherein the operation claims superiority over all others for removing calculi entire from the bladder—there is solution of continuity of none of the vesical structures, walls, neck, or prostate gland, micturition, whether performed by the wound or the penis, remaining a voluntary act. The most ignorant of human beings—those who do not appreciate advantages until they are lost—recognise this as a stupendous consideration. The patient left the hospital three days after the operation with thorough command over the functions of the bladder, passing urine entirely by the penis and being free from pain. The weight of the stone was seven ounces and a half, the removal of which shows the complete realisation of the theory in the practice of lithotrity and the full development of the art of removing the largest calculi from the bladder without interfering with either its structure or function.

The modicum of success attending the methods which are above recorded is the ultimate standard, however, to which they are to be referred before they can be considered to be worthy to supersede time-honoured systems of operating. I herewith introduce, therefore, the accompanying table, which gives a general summary of the work in this department done by me in this hospital during the five years I have held charge of it.

Remarks on the table.—Amongst lithotomies the first thing noticeable in the table is the enormous difference in the percentage of mortality amongst adults in comparison with that of children, whereas in the extension of the sphere of lithotrity this contrast gradually but completely disappears; for of the two deaths which occurred amongst the 408 cases operated upon since Jan. 1st of this year, one was that of a young man about twenty and the other of a female child about five years of age, so that lithotrity, according to the table, seems to tend towards an equilibrium of mortality amongst all ages and both sexes. The greater mortality amongst adults during the lithotomy period is assignable to three principal causes: 1. The insanitary state of the hospital, where erysipelas or gangrene, or both, attacked almost every adult who was operated upon, and amongst old men sloughing of the scrotum was common, but I have never seen a child or boy under fifteen years of age attacked by erysipelas after lithotomy. I have noticed an unhealthy discharge from the wound and a little swelling of the lower part of the scrotum, but only for a day or two; and this condition in the child never resisted treatment, as in the adult. The operation was performed just as well in the adult as in the child or boy, and they were both placed afterwards under the same conditions; this immunity of children and boys under fifteen years of age must be attributed, therefore, to the fluids which bathe the vigorously developing tissues, forming a complete antidote to parasitic life. 2. Lithotrity at first absorbed the most favourable cases, leaving the less favourable ones to lithotomy, still labouring under insanitary conditions. 3. The system of operating on all who came to hospital under these conditions would no doubt contribute a certain percentage of mortality, for the weak and infirm would be, theoretically, less able to ward off contagion. With lithotrity, however, all this is changed. I have never seen erysipelas attack a case of lithotrity, either urethral or perineal. Its causes of mortality were suppression of urine and peritonitis,

arising from inferior instruments and my inexperience; for when I at last succeeded in obtaining my new set of lithotrity instruments I had a hundred cases without a death. From the time (1891) when perineal lithotrity was introduced, together with the other methods described above, mortality began to rapidly decrease, and even to almost disappear, as will be seen on referring to the table. At the end of last year a death occurred at Case No. 569, and in July of this year another took place at 970. Excluding from these 15 females, there remain 386 males of all ages. If 172 children and boys under fifteen years of age be deducted there remain 214 adults who were operated upon in succession without a death; and amongst children and boys under fifteen years of age I have at present, including perineal lithotrities, the number of 338, and these are still increasing. The weights of the largest stones which have been successfully removed by the above methods are: 73 over one ounce, 17 over two ounces, 8 over three ounces, 3 over four ounces and 1 over seven ounces. A glance at the table will show the success which attended Keegan's extension of lithotrity to children and boys under fifteen years of age. The number of operations which have been performed on this class of patients by eight different Indian surgeons is 663 with 18 deaths; the number performed by me, as will be seen from the table, is 503 with 4 deaths, giving a total of 1166 operations with 22 deaths, or 1·9 per cent.; and if my 106 perineal lithotrities be added I have performed 609 operations with 4 deaths. There lie in lithotrity, therefore, an art and a potentiality which invite the enterprising surgeon to cultivate the one and to render practicable, with proper instrumentation, the possibilities of the other.

Table showing by statistical figures—(1) The abandonment of the cutting operations; (2) the extension of the sphere of lithotrity; (3) the introduction of perineal lithotrity; (4) and the comparative rates of mortality of the several operations.

	1889.			1890.			1891.			1892.			1893.*			Grand total.		
	No.	Deaths.	Per-centage.	No.	Deaths.	Per-centage.	No.	Deaths.	Per-centage.	No.	Deaths.	Per-centage.	No.	Deaths.	Per-centage.	No.	Deaths.	Per-centage.
LITHOTOMY.																		
Men	91	14	15·3	54	6	11·0	15	5	33·0	3	1	33·0	—	—	—	163	26	15·9
Children under fifteen years	103	2	1·9	101	1	0·9	—	—	—	—	—	—	—	—	—	204	3	1·4
Women	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	194	16	8·2	155	7	4·6	15	5	33·0	3	1	33·0	—	—	—	367	29	7·8
LITHOTRITY—URETHRAL.																		
Men	11	2	18·0	50	9	18·0	50	5	10·0	130	3	2·3	208	1	0·4	449	20	4·4
Women	5	—	—	11	—	—	6	—	—	12	—	—	15	1	7·1	49	1	2·0
Children under fifteen years	—	—	—	—	—	—	165	2	1·2	186	2	1·0	152	—	—	503	4	0·7
Total	16	2	18·0	61	9	14·8	221	7	3·2	328	5	1·5	375	2	0·5	1001	25	2·5
LITHOTRITY—PERINEAL.																		
Men	—	—	—	—	—	—	40	2	5·0	7	1	14·0	4	—	—	51	3	5·8
Children under fifteen years	—	—	—	—	—	—	30	—	—	38	—	—	29	—	—	106	—	—
Total	—	—	—	—	—	—	70	2	2·5	45	1	2·2	33	—	—	157	3	1·9
Grand total	210	18	8·5	216	16	7·4	315	14	4·4	376	7	1·8	408	2	0·5	1525	57	3·7

* Up to the end of July only.

INGUINAL COLOTOMY FOR THE RELIEF OF IMPERFORATE ANUS, THE RECTUM BEING ABSENT.

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THE following case appears to me to possess some points of special interest.

A female child, whose mother had been delivered by a midwife ten days previously, was brought to me on the eleventh day with its abdomen very largely distended. There was a history that nothing had been passed per rectum since its birth and that persistent vomiting had supervened. The child had voided its urine freely since birth, and to all appearance was fully and normally developed. On introducing the little finger into the anus, however, the reason was apparent, as it was at once found that the lumen of the bowel was occluded about half an inch above the anal orifice. On placing the finger in the depression which marked the normal outlet it felt as if it had been placed in a small thimble. The condition of the patient seemed to be desperate, as she was continually vomiting matter which resembled the yelk of an egg and which, no doubt, corresponded with what in the adult would be termed "stercoraceous" or "feculent." This is easily understood when we reflect that the child had been taking the breast freely for the first nine days after birth without any sickness or possibility of relieving the intestines in any way. The abdomen was much distended and resembled a balloon, so much so that it appeared to be interfering with respiration. The surface of the abdomen had in places a darkish mottled appearance and vermicular movements could at times be seen through the abdominal parietes. The face and lips were a little dusky and it was evident that the child could not survive long if she was not immediately relieved.

Having explained the condition to the friends, the child was placed in the lithotomy position and an incision was made in the median line backwards from the anus, in order that the anal cul-de-sac might be better examined. When this had been done no impulse could be felt when the child cried, and it became fairly obvious that there was a considerable amount of tissue between the cloaca of the intestine and the anal cul-de-sac. The dissection was cautiously continued upwards and backwards to the depth of between an inch and an inch and a half; but still no bulging or impulse could be detected. It was thought therefore to be advisable to proceed no further in this direction, as it was possible that the rectum might be totally wanting, and also that there was danger of opening the peritoneum to no purpose. The wound was accordingly plugged with lint which had been soaked in carbolic oil and inguinal colotomy determined upon. The child was placed under chloroform, the usual incision was made and the peritoneum was exposed; before the cavity of the latter was opened all bleeding points were carefully secured. On opening the peritoneal cavity no bulging sigmoid flexure met the view at the site of the incision. After the finger had been introduced the descending colon was drawn out of the wound, and the explanation of there being no bulging rectum to be felt at the bottom of the perineal dissection, and also why no sigmoid flexure presented itself on opening the peritoneum, was apparent. The descending colon tapered off into a filamentary process, terminating above the brim of the pelvis, and reminded me of a minute vermiform appendix; it was drawn right out of the wound, the end being thus seen

to be free. There could be no doubt that this was the termination of the alimentary canal and that the sigmoid flexure and rectum were both absolutely wanting; but strangely enough, although the abdomen was so greatly distended, this terminal portion of the intestinal canal was practically collapsed and empty. This may perhaps be explained by reversed peristaltic action emptying the terminal portion of the gut, for from the character of the vomit it is almost certain that reversed vermicular movements were present. After the parietal peritoneum had been stitched to the skin, the first step was of course to suture the intestine to the abdominal wall, so that the gut and the parietal peritoneum were in close contact. Then came the *crux*. In an ordinary case I could have left the gut, before opening it, to form adhesions for, at any rate, forty-eight hours, but in this case that would certainly have sealed the child's fate; therefore, to imitate the natural processes in the formation of adhesion as far as was possible, the point of junction of the parietal peritoneum and the intestine was painted with six or seven coats of collodion, thus most effectually preventing any intestinal discharge from being absorbed by the wound or from making its way into the peritoneal cavity. On opening the intestine a quantity of flatus and but very little semi-solid matter escaped. During the next twelve hours a quantity of flatus with some more semi-solid and some hard lumpy matter was passed. The abdomen now presented a normal appearance; vomiting ceased soon after the operation. At the end of twenty-four hours a drachm of castor oil was given and this was succeeded by the passage of a large quantity of solid fæcal matter. On the next day another dose was administered, which was followed by a much more natural motion, and on the following day the dejecta were normal, the bowels acting in the way usual with an infant of that age. The wound was dressed with iodoform and a pad of lint which was frequently changed. The patient made an uninterrupted recovery after the operation without a rise of temperature, sickness or any bad symptom; she is now eight months old and is as fine an infant as one could wish to see. She has been fed entirely at the breast. The only difficulty—and that a serious one—to be contended with was the after treatment in order to keep the artificial anus patent. At the end of three weeks the opening had almost entirely closed, and this chiefly because the mother refused to allow anything to be kept in the wound to combat the tendency of the cicatricial tissue to contract. As a result the cicatricial tissue had to be excised at the end of a month, thus enlarging the contracted opening to a proper size. At the end of three months it again became necessary to remove a further portion, but the parents refused to allow this to be done. They were, however, persuaded to let the child go into the London Hospital, where some more of the constricting tissue was removed and she has done well since.

One or two points in this case appear to be specially interesting: 1. That "whilst there is life there is hope" and that operating promptly may save a child apparently moribund. 2. That collodion may be used with advantage to isolate the peritoneal cavity in those cases where it is inadvisable to wait for the formation of adhesions. 3. That whilst the operation *per se* is simple the after treatment—and that more especially if the child is not in hospital—is far from simple and requires great care.

DIURESIS AND INCREASED EXCRETION OF UREA IN THE THYROID TREATMENT OF MYXŒDEMA.

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THE marked diminution in weight and in obvious bulk which myxœdematous patients undergo when they are treated with thyroid gland is well known, and that this should be accompanied by increased excretion of urea was to be expected; but I believe that the following note contains the first published systematic and continuous analysis of the urine under such circumstances, with the exception of some less detailed observations of my own.[1]

The patient, a woman aged fifty-four, has been twice under the thyroid treatment for myxœdema. In the first course of treatment (May to July, 1892) the thyroid gland was given by subcutaneous injection; in spite of the care exercised in preparation the fluid must have been occasionally septic, as a decided rise of temperature after injection was frequent and once a large abscess developed. The result, however, was all that could be desired—namely, loss of 1st. 11lb. in weight, with the disappearance of the coarse thickening of the hands and face and of the subcutaneous infiltration, reappearance of the patient's features as she had known them many years before, and a remarkable change mentally from an apathetic, torpid condition to one of vivacity, activity and even talkativeness. (Many of the characteristic features of the disease

FIG. 1.

and some of the results of treatment can be seen in the accompanying engravings, which have been taken from photographs.[2]) The patient was readmitted to the Victoria Infirmary on April 5th last suffering from an unmistakable relapse, symptoms of which were noticed about five months after she left the hospital in July, 1892, commencing with pain and stiffness in the lower jaw. These were followed by pain in the back of the neck, lumbar region and hips, by darting pains in the thighs and knees and by an indisposition for physical exertion of any kind. She was also rather sluggish mentally, although emotional and disposed to weep if she was

FIG. 2.

sympathised with; the face was again swollen, and the skin was tense, dry and yellowish in general tint, with marked malar flush. The patient's condition, however, was not nearly so bad as when she was admitted last year; there is more intelligence, the speech is more rapid, a smoother state of the skin is present, and the hair is softer than on that occasion, but the sensation of cold is more keenly felt. Ventricular systolic mitral murmur is present as before. The relapse thus resolves itself into increase in bulk, increased

[1] Glasgow Medical Journal, February, 1893.

[2] For details see the Glasgow Medical Journal, September, 1892.

difficulty of movement, aggravation of general muscular pains and very broken sleep.

The accompanying table shows the progress of the patient during her second residence in hospital. The temperature throughout was normal or subnormal. The points to be noted particularly are: (1) decrease in weight, (2) the diuretic action of the thyroid material, and (3) the very striking increase in the excretion of urea. The last-mentioned point is of value from the fact that under the same routine ward diet the urea should rise from 330 grains in twenty-four hours (the minimum noted on April 15th, and referring, of course, to the urine in the previous twenty-four hours) to 819 grains on May 12th. This may be taken as an index of the activity of the thyroid substance in accelerating tissue change, particularly of the myxœdematous material. The gland was given fresh and raw, finely chopped up and stirred in a cupful of beef-tea or soup, the dose on each occasion being one lobe, equal to from thirty to forty grains. Twelve such doses in all were given, at intervals indicated in the table.

Table showing the Progress of the Patient under the Thyroid Gland Treatment.

Date: 1893.	Weight.	Thyroid gland given.	Urine.			
			Fluid ounces: 24 hours.	Specific gravity.	Urea: Grains per ounce.	Urea: Grains in 24 hours.
April 14th ..	—	—	37	—	—	—
,, 15th ..	14 st. 2 lb.	Thyr.	55	1015*	6	330
,, 16th ..	—	—	41	1018	11	451
,, 17th ..	—	Thyr.	76	1015	7	532
,, 18th ..	—	—	56	—	—	—
,, 19th ..	—	—	56	—	—	—
,, 20th ..	—	Thyr.	68	—	—	—
,, 21st ..	—	—	46	—	—	—
,, 22nd ..	13 st. 9 lb.	—	94	—	—	—
,, 23rd ..	—	—	51	—	—	—
,, 24th ..	—	Thyr.	51	—	—	—
,, 25th ..	—	—	42	—	—	—
,, 26th ..	—	Thyr.	68	1016	9	612
,, 27th ..	—	—	60	—	—	—
,, 28th ..	13 st. 3 lb.	—	68	—	—	—
,, 29th ..	—	Thyr.	52	1019	13	676
,, 30th ..	—	—	60	—	—	—
May 1st ..	—	—	60	—	—	—
,, 2nd ..	—	Thyr.	44	1021	14	616
,, 3rd ..	—	—	51	—	—	—
,, 4th ..	—	Thyr.	60	1019	10	600
,, 5th ..	12 st. 13½ lb.	—	56	—	—	—
,, 6th ..	—	Thyr.	46	1022	12	552
,, 7th ..	—	—	42	—	—	—
,, 8th ..	—	—	45	1021	12	540
,, 9th ..	—	—	42	—	—	—
,, 10th ..	—	Thyr.	42	—	—	—
,, 11th ..	—	—	50	1020	11	550
,, 12th ..	12 st. 10½ lb.	—	63	1021	13	819
,, 13th ..	—	—	45	—	—	—
,, 14th ..	—	—	42	1021	11	462
,, 15th ..	—	—	47	—	—	—
,, 16th ..	—	—	52	1020	12	624
,, 17th ..	—	Thyr.	36	1021	11	429
,, 18th ..	—	—	39			
,, 19th ..	12 st. 8 lb.	—	48	—	—	—
,, 20th ..	—	Thyr.	44	1019	11	484
,, 26th ..	12 st. 5 lb.	—	—	—	—	—

* Acid; no albumen.

NONDESCRIPT CHANCRES.

BY TOM ROBINSON, M.D. BRUX., L.R.C.P. LOND., M.R.C.S. ENG.

Initial lesion probably commencing at the os uteri.—I was attending a patient for typical constitutional syphilis during 1892, and whilst the initial lesion was present he had congress with a married woman. I was asked to examine this woman with the object of ascertaining whether she had been infected. She came for that purpose twenty-four days after the exposure. A careful examination was made but no sore was found on the genitals. The os uteri was, however, eroded, but no difference could be observed between the condition present and the clinical state which is known as erosion of the cervix. It was left an open question whether the patient was infected or not. Subsequently a roseolar eruption, general adenitis and condyloma of the tonsils left no possible doubt as to the infection having been received.

The fact that few true Hunterian chancres are seen in the extreme organs of generation of the female has attracted the attention of all those who have written on venereal diseases. This scarcity is probably due to physical causes. Clerc states that chancres of the cervix are not uncommon, but it is only by either waiting for the manifestations or by inoculation that we can distinguish them with any precision. He relied upon inoculation with the discharge from the ulcers. Zeissl states that if the os uteri which has been infected be pressed upon by a wooden rod the fibro-plastic material deposited in the part will appear like a mass of mother-of-pearl; in this case it certainly was not so, and for our own part we would much prefer saying that it is impossible by any examination to distinguish the difference between the initial lesion of syphilis in the os uteri from the erosions and ulcerations which are so commonly met with by gynæcologists in this position.

Indurated chancre of the meatus urinarius.—During the autumn of last year a man aged twenty-four presented himself for treatment for venereal disease. He stated that he had been exposed to infection three weeks previously, and that within four days he had noticed something wrong with the penis and said there was an oozing from the organ which he thought to be an ordinary gonorrhœal discharge. When first examined there was an ulcerated surface which practically surrounded the urethra. The ulcer was covered with pus. A month afterwards there were induration of the glans penis and well-marked bullet-like enlargement of the inguinal glans. On looking into the urethra "nibbled" ulceration could be seen occupying nearly the whole of the mucous tract as far as could be seen without a speculum. There were also two purulent sores on the left side of the frænum. It was not possible on the first inspection to detect any induration, but as time went on there was considerable density about the sore and the ulceration spread around the orifice of the urethra over about a sixth part of the glans penis. The sore was most troublesome and did not permanently heal until after quite three months of treatment. The remedy which was found locally to be the most efficacious was a powder composed of one part of dried table salt and two parts of calomel. The sore eventually healed, but it has left a conspicuous depressed scar (whenever a chancre attacks the glans penis it leaves a permanent scar).

Chancre of a sebaceous follicle in the cheek.—A medical student whose face was much disfigured by physiological acne whilst dressing the out-patients of his hospital assisted in the operation of a circumcision in a case of phimosis. A true chancre was found on the corona. About five weeks afterwards he noticed a swollen sebaceous follicle on his left cheek, which he believed to be an inflamed acne spot; this he pinched and pressed a good deal, but as it continued he became anxious. On inspection there was found to be a mass about the size of a nux vomica seed, and somewhat like one in shape, on the left cheek; it was not matted in the surrounding tissue, but could be moved about. The submaxillary glands on this side were indurated, but not those on the other side. Time helped in the diagnosis and the appearance of a copious roseola and other troubles proved the fact that he had inoculated a sebaceous follicle, probably by his own fingers, as he admitted that he frequently squeezed the acne spots.

The last case is probably not uncommon. Syphilis has been known to find its way into the organism through the mouth of a sebaceous follicle of the penis, and chancres which are carried to the breast of foster mothers by syphilitic children commonly involve the deep nipple glands. The case is of interest because it warns us to be on the watch for the manifold ways in which syphilitic infection occurs, and it shows us how difficult it is in some positions to draw a distinction between specific and non-specific inflammation.

Remarks.—The case of chancre around the meatus urinarius has probably been seen in the practice of all those who have had an opportunity of watching syphilis. It was puzzling to account for the secondary infection of the mucous membrane at the side of the frænum, and the extent of destruction of tissue was greater than one generally finds in the initial lesion of syphilis, as also was the time it took to complete the healing process. The positions where chancres have been most troublesome are those which occur at the orifices of the body, such as the mouth, urethra, anus or os uteri; and it is not difficult

to see the reason. In all these positions there is movement and exposure to irritation. I have known chancre of the lip to last for four months before the tissue was sound.

The length of this paper might be extended without trouble if I were to give the history and clinical evidence of many other chancres which have been under observation. The above cases have been selected from a group because they are probably the most unusual varieties and the most difficult to diagnose.

Prince's-street, Cavendish-square, W.

ASCARIDES LUMBRICOIDES.

BY HENRY ALSTON, M.B., C.M.,
TRINIDAD MEDICAL SERVICE.

PROFESSOR RUTHERFORD of Edinburgh has very beautifully compared theories to the leaves of a tree—the leaves fall from time to time, to be replaced by others, and yet the tree continues to grow. One theory, which was formerly taught dogmatically in text-books and was once supported by great authorities, is fast decaying—viz., the theory that rickets is due to improper feeding of young children. Dr. Theobald A. Palm's article on the geographical distribution of rickets has completely disproved the old theory.[1] It is probable that the disease is due to the want of pure air and sunshine, and in time, I have no doubt, a germ will be discovered to account for it. In Trinidad improper feeding is as common as in England and, judging from the very high percentage of illegitimate births (60 per cent.), neglect of children must be frequent; yet I have never seen a case of rickets in Trinidad and no case is recorded in the hospital reports. There is another belief prevalent that has no more foundation than the old theory of the causation of rickets, and, like that theory, may be supported by some authorities—I refer to the symptoms alleged to be due to the presence of ascarides in the bowels. On a previous occasion[2] I pointed out certain reasons for not accepting such a view and I have met with two cases lately which confirm me in my opinion. I was called to see a child aged three years suffering from slight fever with a few râles, audible on auscultation over the large bronchi, and rapid respiration (hyperpnœa). I administered an anthelmintic and a purgative, and as a result several worms were passed and recovery was rapid. On the following day, by a strange coincidence, I was called to see a child of the same age and sex, suffering from exactly the same symptoms. I administered a similar anthelmintic and purgative, and after the bowels acted the symptoms rapidly disappeared, as in the previous case, but no worms were passed, although carefully looked for. There are at least eight serious objections to the belief that the ascarides produce symptoms. 1. Intestinal irritation can be caused, and is frequently caused, by chemical changes in undigested food or ptomaines. 2. A purgative (and perhaps an intestinal antiseptic) is administered with the anthelmintic, and the beneficial effects of the purgative are ignored. 3. The children of the poorer classes are apt to eat dirty food and to drink dirty water, and are therefore more likely to swallow the ova of the ascarides. Their food is not only dirty but is often indigestible, and frequently lacks the necessary nutritive materials. This must result in emaciation and debility. Worms cannot produce emaciation, for it is a scientific fact that all the nourishment of the food is not absorbed from the bowels even in health. 4. Ascarides very seldom cause symptoms in adults, but the intestinal mucous membrane of children is supposed to be very susceptible to solid irritants. That this is not the case is shown by the impunity with which children eat unripe fruit and swallow all kinds of foreign bodies within certain limits. 5. The worms may be in the bowels for days, or even for weeks, without producing symptoms. They only act as irritants when diagnosed. 6. There is no definite relation between the number of worms present and the symptoms produced. 7. The supposed symptoms of the ascarides are very indefinite. There are simple symptoms, such as abdominal protuberance, irritation of the nose, grinding of the teeth and dilatation of the pupils; and there are more serious symptoms, such as fever, convulsions, epilepsy, chorea &c. Professor Penberther has pointed out an association of worms with epilepsy in certain animals.[3] One would expect to find that an animal physically or mentally weak would be more apt to acquire worms. 8. Other worms exist in the bowels, and it is not asserted that they produce reflex irritation. The anchylostomum duodenale is said to be a blood-sucker. In one case of marked anæmia after death only about nine of these tiny worms could be found. These worms cannot act as serious blood-suckers unless they are constantly expelled after repletion with blood in large numbers from the bowels.

If ascarides do not produce irritation in a canal intended by nature to contain foreign matter do they act in other ways? There are but two other ways that I can imagine. They may on certain fixed days known only to themselves produce toxines, or they may in some unknown way discharge ova into the blood, which act as emboli in the brain and produce temporary symptoms. Imagination cannot go any further. I think that the following categorical statements are supported by facts: 1. Certain indefinite symptoms which occur in children will disappear when a purgative is given, whether or not worms be present. 2. The apparent beneficial effect of an anthelmintic is due not only to the purgative administered with the anthelmintic, but also to the influences brought to bear on a child when it is considered necessary to treat it. 3. Sickly, ill-fed children are not benefited by the expulsion of worms unless they are treated afterwards. 4. The knowledge of the necessary quality and the exact amount of proteid and other food required for children at different ages for health and growth is the best way of preventing intestinal irritation and is more important than the knowledge of anthelmintics. 5. The scientific reason for giving an anthelmintic is to prevent the excessive accumulation of the ascarides, for if very numerous they may lead to partial intestinal obstruction and absorption of ptomaines, or they may cause complete intestinal obstruction, directly or indirectly. There is also the possibility that an ascaris may pass into the respiratory passages or into the bile-duct and produce characteristic symptoms.

[1] Medical Annual, 1892.
[2] THE LANCET, Feb. 11th, 1893.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

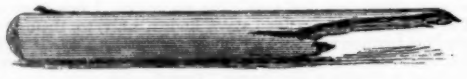
A FOREIGN BODY IN THE LEFT ORBIT; REMOVAL; RECOVERY.

BY CHARLES RAMAGE, M.D. EDIN.,
LATE HOUSE SURGEON, MANCHESTER ROYAL EYE HOSPITAL.

A SCHOOLBOY aged nine was admitted into the Manchester Royal Eye Hospital on May 23rd, 1892, with a history of having been thrown down a fortnight previously upon the paved floor of a lavatory. At the time of the accident he had a pen in his hand and this was forced into the left orbit by the fall. It was pulled out and all history of any portion being left within the orbit was denied by his schoolmates, parents and medical attendant. Severe inflammatory symptoms having developed, he was admitted as an in-patient. On admission there was found to be complete ptosis, with swelling and redness of the lids and marked proptosis; the eye was fixed and immovable in the middle line, the cornea was clear, the pupil was dilated and motionless, the media was clear, the papilla was swollen and the outlines were blurred, and the retinal veins were engorged and tortuous, but there were no hæmorrhages. The patient could see fingers and there was no tension of the eye. There was a small wound of the upper lid at the upper and inner

[3] THE LANCET, Feb. 25th, 1893.

angle of the orbit. This was partly healed and showed a trace of purulent discharge, whilst the whole orbit seemed to be partly filled by a hard, firm mass, in which no fluctuation could be detected. A probe at once revealed the presence of a foreign body lodged in the inner wall of the orbit. Chloroform having been administered, I enlarged the wound and carried another incision upwards and inwards from its lower end towards the root of the nose so as to turn back a triangular flap and dissect down on to the foreign body, which lay embedded in, and with its outer extremity almost level with, the upper part of the inner wall of the orbit, just behind the lacrymal bone. By breaking away a little of the orbital plate of the ethmoid I was able to seize the foreign body with a vulsellum and a pair of dressing forceps and to withdraw it. Examination showed that it was the upper part of a wooden penholder, measuring 2¾ in. in length and ¼ in. in breadth. The wound was syringed out with corro-



sive sublimate solution and a drainage-tube was inserted; it was then dusted with iodoform and a pad steeped in corrosive sublimate solution was applied. On May 24th the temperature was 99·2° F. and there was no pain. On the 25th the temperature was 99·2°. The discharge was very slight and the proptosis and swelling of the lids were less. On the 26th the temperature was 98·4°. Attempts were made to move the eyeball up and down. On the 29th the drainage-tube was shortened as the wound healed from the bottom. The pupil was dilated and fixed, but there was slight movement upwards and downwards. On the 30th there was a trace of haziness at the lower part of the cornea. A drop of eserine was instilled. On June 7th there was a small ulcer at the lower part of the cornea, which was slow in healing. On July 2nd the drainage-tube was removed. The ptosis disappeared, but there was very slight proptosis. The pupil reacted slowly and the mobility of the eyeball was gradually returning. The corneal ulcer had healed. On the 27th the patient was discharged from hospital. There was no ptosis and no proptosis. There was a slight defect of the superior and external recti, but the other muscles were acting well. The pupil was mobile and regular, but there was a small nebula at the lower part of the cornea. The wound healed, but a slight hardness and swelling remained at its site. When the boy was last seen, on Sept. 15th, 1892, the eye was in normal position, with good movements in all directions except upwards, where it was still slightly defective. There was a small corneal nebula. The pupil was active and round. Vision was equal to seeing fingers. The optic disc showed signs of atrophy. In all probability the foreign body lay in the body of the sphenoid, though, taking into consideration the small size of the sphenoidal sinuses in children and the length of the piece of wood, with its position and the direction of its axis (backwards, upwards and inwards), it is conceivable that it had penetrated and lay within the cavity of the cranium.

Hornsey-road, Holloway.

A CASE OF TRACHEOTOMY IN WHICH A DANGEROUS COMPLICATION ENSUED UPON THE USE OF A DOUBLE CELLULOID TUBE.

BY WILLIAM TURNER, M.R.C.S., L.R.C.P. LOND.,
ASSISTANT HOUSE PHYSICIAN TO KING'S COLLEGE HOSPITAL.

A BOY aged three years and a half was admitted into King's College Hospital under the care of Dr. Lionel Beale on Tuesday morning, Sept. 12th, when tracheotomy was performed for diphtheria with laryngeal obstruction. The boy progressed favourably until Friday night, Sept. 15th, when, some blood being noticed in the expectoration, it was thought to be advisable to replace the silver bivalve tube by a slightly softer instrument. A celluloid double tube was therefore chosen, this being the first trial given to this kind of tube at this hospital. Everything was satisfactory until the next morning, when at 7.30 A.M. it was noticed that an attack of dyspnœa was not permanently relieved by the removal of the inner tube. This led to a careful examination, and it was discovered that the outer tube had become detached from the guard piece (not broken off). On the removal of the latter the top of the tube could not be seen at the bottom of the wound and therefore it must have been sucked down into the lower part of the trachea. As the child became very cyanosed, with urgent dyspnœa, the wound was enlarged and the trachea was opened down to the fifth ring. The tube could not be felt with the finger or with a pair of dressing forceps (the only instrument at hand); the child was therefore inverted and forcible expiration was attempted by means of compressing the thorax. This resulted in the top of the tube being just felt by the little finger, which was introduced as far as possible into the trachea. The forceps were then introduced and with great difficulty the tube was extracted just as the child had ceased to breathe and was becoming pulseless. This resulted in the speedy restoration of the child, and though he was very collapsed for some time afterwards he was doing very well on Sept. 18th.

THE PHYSIOLOGICAL ACTION OF OXYGEN.

BY J. L. KERR, M.D. ABERD., F.R.S. EDIN.,
LATE EXAMINER IN CHEMISTRY AND IN MEDICAL JURISPRUDENCE, UNIVERSITY OF ABERDEEN.

IN the month of November, 1892, I had in my possession a cylinder of compressed oxygen, in quantity about twenty cubic feet and of 93 per cent. guaranteed purity. In a spirit of mere idleness a friend and I tried the effects of large inhalations of the pure gas; but quickly entering into the spirit of scientific accuracy we altered our methods and inhaled for a considerable period an atmosphere of nearly pure oxygen. We were both in perfect health and our observations, complete in our case, must not necessarily be supposed to be the same as in a state of disease. The results were most surprising to me; my friend had no medical knowledge and did not know what to expect and had, therefore, no preconceived opinions, and this gives more value to my report, as his experiences were the same as mine. Breathing the oxygen in a confined space, so as to inhale as little natural air as possible, and taking deep inspirations, I found that there was no flushing of the face or feeling of quickened vitality, as was shown by the absence of any exhilaration; there was no quickened pulse-rate and, as far as I could judge, there was not the slightest rise in temperature. These were the negative observations. The only positive result that we could see was a distinct diminution of the frequency of respiration. The intervals between the respiratory acts were greatly increased and there was a feeling that there was no urgency to repeat it; the *besoin de respirer* was entirely abolished for the time being. As far as I could judge the lengthening of the respiratory intervals balanced the increased supply of oxygen to the lungs, and therefore to the blood, in an automatic manner. I write this account of my experience of the inhalation of oxygen as my observations were confirmed at the meeting of the British Association at Nottingham. I was much struck with the facts at the time, and I only awaited confirmatory experience to publish my notes.

Crawshawbooth, Manchester.

OPENING OF A NEW HOSPITAL AT BUDNEIRA, INDIA.—On July 8th an interesting ceremony took place in the town of Budneira, which consisted in the opening of a hospital which has been provided for the inhabitants of the district by the munificence of Mr. Jehangir Hormusji Mody, a wealthy merchant of Bombay. The function was graced by the presence of a large number of influential visitors, both English and native. Not the least interesting part of the event was a speech delivered by Mr. Mody, in which the circumstances connected with the founding of the charity were fully set forth. Colonel Mackenzie, in declaring the building opened, spoke of the gratification which would be afforded to the Resident by the act of the generous donor, and the benefit the surrounding populace would derive from the institution.

SUPERANNUATION IN THE POOR-LAW MEDICAL SERVICE.—Dr. W. Woodward, late medical officer of the third district of the Worcester Union, has been granted a superannuation allowance of £50.—Dr. King, formerly medical officer for the Eltham district of the Lewisham Union, has been awarded a pension of £28 5*s.* per annum.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

OSTEOPLASTIC RESECTION OF THE SUPERIOR MAXILLA FOR NASO-PHARYNGEAL POLYPUS BY A METHOD HITHERTO UNDESCRIBED; REMARKS.

(Under the care of Mr. C. MANSELL MOULLIN.)

THE various methods of treatment recommended in cases of naso-pharyngeal tumour indicate to some extent the difficulty of dealing with growths in this situation. Their removal by avulsion, ligature, and the galvanic wire, or their slower destruction by caustic, has been tried, and with some success; but the extreme difficulty of destroying the base of the tumour by these methods has led many surgeons to discard them for other operations which permit of a more certain extirpation and give greater promise of cure. We have therefore, as Mr. Moullin points out, a large number of methods at our disposal, each of which involves section of bone. Mr. Jackson divides them into three groups: (1) those in which the attack is made by the mouth; (2) those in which the attack is made through the nose; and (3) those in which the attack is made by removing the upper jaw, partially or completely, or by resecting this bone osteoplastically.

The patient, a tall, well-built young man twenty-one years of age, was sent to Mr. Mansell Moullin in November, 1892, by Mr. Mark Hovell with a history of naso-pharyngeal polypus. Eighteen months previously he had begun to experience a persistent choking sensation in the throat, with occasionally a discharge from the nose, but there was no epistaxis. In April, 1892, during a violent attempt at expectoration, a tumour suddenly protruded into his mouth from the back of his throat. This was removed at the Hospital for Diseases of the Throat, Golden-square, and a subsequent operation was performed in August. On admission to the London Hospital the patient complained of difficulty in breathing, especially when he was lying on his left side. The voice had a distinct nasal twang; but he was able to blow down both nostrils. There was a prominence of the left tonsil and of the left posterior pillar of the fauces, and on digital exploration a soft mass could be felt behind and above the velum on the right side, but its point of attachment could not be made out. It was explained to the patient that it was necessary to thoroughly expose the site from which the tumour sprang if it was to be removed effectually, and accordingly on Dec. 3rd the following operation was performed. After the patient had been anæsthetised the trachea was opened, a tube was inserted and the pharynx was plugged with a sponge. A skin-flap was then marked out on the side of the face by an incision similar to that which is known as Fergusson's for the removal of the upper jaw; but instead of reflecting this outwards it was only detached from the bone along its inner border and from above downwards as low as a line running from the inferior end of the nasal bone to immediately above the maxillary tuberosity. An elevator was used for that part of the separation which extended behind the outer angle of the orbit. The mouth was then opened with a gag and two incisions down to the bone were made through the mucous membrane covering the hard palate. One of these ran from before backwards a little to one side of the middle line. The other followed the curve of the alveolar arch, lying well inside it, and extended from just in front of the hamular process of the internal pterygoid plate to join the first immediately behind the anterior palatine foramen. The flap thus marked out was detached from the bone on the roof of the mouth and reflected backwards as far as the posterior margin of the hard palate. The median incisor tooth of the same side was then drawn, an incision was made down to the bone along the floor of the nostril, and the superior maxilla was divided with bone forceps in two places, first along the hard palate from before backwards and then along the facial surface from the upper part of the opening for the anterior nares to the posterior border above the tuberosity. The blades of the closed forceps were then inserted between the two halves of the hard palate and the whole of the lower portion of the superior maxilla, carrying with it the inferior turbinate bone, was lifted out and reflected with the skin flap until it lay by the side of the face with its surfaces reversed. In this way, after a few projecting points of bone had been removed, the whole of the space bounded by the orbit above, the soft palate below, and the septum in the middle line was exposed to view, and the origin of the growth from the internal pterygoid plate, just where it springs from the under surface of the sphenoid bone, could be made out. This was scraped away freely (the plate itself appeared to be considerably thickened as if it was expanded by a growth inside it), the superior maxilla was brought back into position and fastened by a single wire suture, the soft covering of the hard palate was readjusted and sutured with silk and the facial wound was closed with catgut. A plug of iodoform gauze was placed in the upper part of the pharynx on account of the persistent oozing, and the tracheotomy tube was left in, as, owing to the height of the arch of the palate, the central portion of the mucous flap fell away from the bone and had to be supported from beneath by means of a sponge in the mouth. On the following day the sponge and the tube were removed, the flap maintaining its proper position, and on the next day the iodoform plug was taken out. There was no hæmorrhage or rise of temperature, and at the end of a month the alveolar arch and the hard and soft palate were intact, the facial wound was sound, and there was no discharge or sinking in of the infra-orbital region. The patient was shown at a meeting of the Clinical Society in January and he was seen again last July. There was no recurrence and the line of the incision was in no way conspicuous.

Remarks by Mr. MANSELL MOULLIN.—The difficulty of dealing effectually with the severer forms of naso-pharyngeal polypi is well known. Small growths springing from the posterior nares or from the structures immediately around can be detected by means of instruments introduced through the nose or pharynx, with or without previous division of the palate; but older ones, and especially those which have recurred after incomplete removal—perhaps more than once—frequently acquire such extensive connexions and contain such enormous venous plexuses that unless the whole of the meso-pharyngeal cavity can be exposed the attempt is hardly likely to be successful. How the additional space is to be obtained depends in each case upon the size and situation of the growth, and an extraordinary amount of ingenuity has been displayed in devising operations by which it can be accomplished with the least risk and the smallest amount of disfigurement. Bosworth, in his work upon Diseases of the Nose, has enumerated no less than seven distinct methods of dealing with the hard or soft palate, five more in which various parts of the nasal cavities are exposed by incisions through the skin and soft parts only, and thirteen different methods of osteoplastic resection of the superior maxilla and the bones immediately adjacent; and this does not include either Weber's operation or the present one, which I consider compares very favourably with the others both as regards the amount of space gained and the small degree of disfigurement left. In Weber's operation the cutaneous incision is the same, it is true; but there is a double section of the superior maxilla, one line running through the orbit (a condition which usually leaves behind it œdema of the lower eyelid), the other being immediately above the roots of the teeth and so close that it is impossible to avoid cutting some of them across. That of Langenbeck is scarcely practicable unless the growth extends into and widens out the zygomatic fossa, and it leaves two scars right across the cheek. Billroth's operation, in which the lines of incision are almost the same, with the hinge at the pterygoid end, is open to the same objection. Huguier's and Cheever's operations, in which the upper jaw is forcibly depressed either on one side or on both, do not give nearly as much space for manipulation; and that of Roux, in which all the attachments to adjacent bones are divided through single skin incisions and the superior maxilla is forcibly driven into the temporal region, only gains half an inch. In the one under notice the main vascular connexions of the superior maxilla are not seriously interfered with, so that, as in the case of some of the others, there is no fear of non-union or of necrosis, and the teeth are unhurt; if the tooth that is extracted is kept and properly mounted afterwards, no gap is left; the facial contour is not affected and the line of the incision is concealed as

far as it can be; the orbital margin is not broken; and though the bony portion of the lachrymal canal is cut this has not as yet given the patient any inconvenience. The only structure of importance that is seriously injured is the infra-orbital nerve, which has all its branches severed either in the canal or immediately after their exit.

PADDINGTON INFIRMARY.

A CASE OF SUBCUTANEOUS EMPHYSEMA FROM A RUPTURED VOMICA.

(Under the care of Dr. SNELL.)

THAT this condition is a rare one is shown in the report of a case described by Mr. Shelswell and published in THE LANCET of Dec. 21st, 1889. Dr. Snell confirms our observations as to the rarity of this complication and the paucity of the references to it which are to be met with in medical literature. Indeed, emphysema as an accompaniment of any form of disease of the air passages hardly receives attention in works on medicine, subcutaneous emphysema not being mentioned in the index of many of them. It has been described as following the excessive straining during parturition and also in whooping-cough in patients otherwise in good health, and has resulted from the perforation of an ulcer of the trachea or bronchi. Dr. Fagge wrote: "A very rare effect of excavation of the lungs in the production of subcutaneous emphysema." Frantzel, alluding to it, wrote: "This subcutaneous emphysema is sometimes observed in caseous pneumonia without pneumothorax in the case of a vomica reaching as far as the pleura pulmonalis, causing adhesions between this and the pleura costalis and perforating both pleural folds at once." Dr. Brown has described two cases in which some of the air vesicles were ruptured in consequence of violent cough, and in which air escaped into the posterior mediastinum and thence spread all over the body. Both ended fatally.

A painter's labourer aged thirty-two was admitted on Jan. 9th of this year with symptoms of phthisis which had existed for eighteen months; there were physical signs of consolidation at both apices. The patient remained in the infirmary in very much the same condition until Feb. 26th. A more or less marked hectic temperature persisted during this period. On the evening of that day the right side of the face suddenly became swollen; this was found on examination to be due to subcutaneous emphysema; the next morning the neck was much swollen, the swelling extending over the whole of the chest anteriorly and posteriorly and in the lumbar region down to the iliac crests, also down the left arm to the wrist and down the right arm to the elbow. The percussion note at both apices was hyper-resonant; the breath-sounds could not be heard on account of the crepitations produced by the emphysema. On March 1st the emphysema was slightly, but not much, less. Between Feb. 26th and this date the hectic temperature had disappeared and the temperature had remained subnormal—it now rose to 101·2° F.; the pulse was 144 and of very low tension; the patient's condition was critical. The pupils were not dilated. On March 4th the emphysema was much less, but still present. The patient died on March 5th.

The necropsy showed that there was no pneumo-thorax on either side; the upper lobe of the left lung was filled with tuberculous nodules of various sizes, the largest breaking down into purulent material; there was no perceptible cavity. The upper and middle lobes of the right lung were riddled with tuberculous nodules, there being some broken-down ones as large as filberts; a cavity of irregular shape as large as a walnut was found near the apex; the pleural surfaces at the right apex were excessively adherent. The cavity above mentioned extended upwards by an irregular ulcerating track, which passed through the pleura at the apex and allowed a probe to be passed through it behind the first rib. The adhesions at the apex were very extensive and resistant. No noticeable disease of the other organs existed.

Remarks by Dr. SNELL.—A somewhat similar case occurred at the Birmingham Children's Hospital and was reported in THE LANCET of April 29th of this year. Since the condition is barely mentioned in the text-books it is feasible to infer that the supervention of subcutaneous emphysema in phthisis must be a comparatively rare occurrence. When it does take place death appears to be imminent.

BRECHIN INFIRMARY.

AN EXTENSIVELY ADHERENT OVARIAN TUMOUR; REMOVAL; RECOVERY.

(Under the care of Drs. MACKIE and PARKINSON.)

IT is extremely difficult to determine in any case of ovarian tumour whether there are adhesions to surrounding parts or not. We must usually look to the history of the case for assistance in our diagnosis. If any statement is given of attacks of abdominal pain, with or without vomiting, then there is a strong probability that adhesions are present. This case is, however, an instructive example of the fact that we must not place too much reliance on the history; the fixity of the growth and the immobility of the abdominal wall were doubtless regarded as important signs in this patient. The pelvic adhesions are usually those which cause most difficulty to the operator and danger to the patient from fear of tearing the ureters, bladder, rectum or important vessels.

The patient, a multipara aged thirty-one years, her youngest child being eleven years old, was admitted into Brechin Infirmary on July 1st, 1893. About twelve months ago she felt a sharp pain in the hypogastric region and shortly afterwards observed a swelling in that region a little to the left of the median line. The swelling continued to increase rapidly and the pain, though not severe, was much aggravated by walking. For the past six months she had frequency of micturition; but apart from this there were no general or local functional disturbances. Menstruation remained perfectly normal throughout the whole period. For the past month she had felt an uncomfortable stretching of the abdomen. Upon examination the abdomen was found to be much distended, bulging more to the right than to the left side. The subcutaneous abdominal veins were distended and the umbilicus was slightly retracted. The tumour, which consisted of an elastic mass with distinct divisions, was quite immovable in any direction. In the act of taking a deep inspiration the abdominal wall did not move over the tumour. The uterus was found to be firmly fixed, but its cavity was not encroached upon. There was no history of previous inflammatory attacks to indicate the formation of adhesions. On the 6th chloroform was given and an incision of about four inches was made over the tumour in the median line. As soon as the peritoneum was reached it was found that there were firm adhesions of that structure to the tumour midway between the umbilicus and symphysis and extending downwards. Above this the omentum had an attachment for several inches. Three cysts were now tapped, their contents varying very much. The adherent portion of the omentum was ligatured and separated from the cyst with the knife. The adhesions to the anterior abdominal wall were torn through by manipulation. The tumour was now found to be firmly attached to the upper surface of the bladder, the upper and posterior surface of the uterus, to the whole of the right broad ligament and to the peritoneum in the region of the right sacro-iliac synchondrosis. To separate the tumour from the bladder was very difficult, and for a time it seemed that a portion of it would have to be ligatured and left attached; however, with care the adhesion was separated. The attachment to the uterus, being so extensive, could not fail to cause considerable injury to that organ in its separation. The right ovarian artery was ligatured and the right broad ligament removed with the tumour. The other peritoneal attachments were not difficult to overcome. The abdominal cavity was carefully washed out with weak carbolic lotion, a drainage-tube was put in and the abdominal incision was closed. For two days there was a little sickness, which, however, did not trouble the patient after that time. The day after the operation the temperature rose to 100·2° F., but fell to normal in the evening; this morning rise and evening fall continued for five or six days. On the sixth day the temperature rose to 100·4°, but after this it gradually fell. Twenty-one days after the operation the patient was able to rise and at the present time she is perfectly well.

Remarks by Dr. MACKIE.—The chief interest of this case lies in the extensive adhesions and the good recovery after such extensive separation. It again illustrates how well patients bear abdominal operations when thorough antiseptic precautions are carried out.

Reviews and Notices of Books.

Lectures and Essays on Fevers and Diphtheria, 1849 to 1879. By Sir WILLIAM JENNER Bart., G.C.B., M.D. Lond., F.R.C.P., D.C.L. Oxon., LL D. Cantab. and Edin., F.R.S. London: Rivington, Percival and Co., 1893.

IN undertaking the re-publication of the writings with which his name will always be associated Sir William Jenner has earned the gratitude of the members of the medical profession for the opportunity thus afforded them of becoming acquainted with his early work, which is no longer accessible save in the libraries of medical societies and institutions. He has acted wisely, too, in not attempting to add to or to revise (except as regards a few minor points) the text of the essays and lectures themselves. To annotate and "bring up to date" the papers of forty and odd years ago, before the thermometer came into clinical use, would not only have been a task of considerable magnitude, but would have largely detracted from the intrinsic merit and interest of the writings themselves, for in their present and permanent stage they will remain as landmarks of the pathology of the specific fevers at the time at which they were penned; they exhibit, too, an invaluable attribute in that they are the recorded results of patient and painstaking clinical and pathological research which was destined to exercise a marked influence on medical ideas; and, lastly, they have a deep personal interest, for the earliest of them were composed when their author was on the threshold of his career, before his influence as a teacher had been exercised or his position as a physician assured. It is impossible to read these first-fruits of his assiduous exertions without perceiving that in them there lies the key to the eminence which he subsequently attained to. It was not that the author propounded new and startling theories or generalised from a slender basis of fact; rather was it that he sought diligently, and as minutely as the knowledge and appliances of the time permitted, for every fact that nature presented to him in the ward and deadhouse. By so doing he established beyond dispute the distinct and specific nature of each of the forms of "continued fever"—not that he was the first to suggest it, but that the grounds he advanced were those which carried conviction to minds till then unconvinced. The insight which the perusal of these papers gives into the only sound and safe methods of clinical observation cannot but prove of benefit and a source of encouragement to those who to-day are, as he was then, entering on the arena of medical research.

The main bulk of the volume consists of Sir William Jenner's writings on Fevers. There is first the monograph on the "Identity and Non-identity of Typhoid and Typhus Fevers," which ran through several consecutive numbers of the *Edinburgh Monthly Journal* in 1849 and 1850. It consists of a comparison carried through each section of the subject of the conditions—clinical and anatomical—found in cases of these two diseases. The record is transparently faithful, and no more convincing method of demonstrating the absolute difference between the two fevers could be devised. The truth of the statements made is exemplified in the fact that the experience of to-day confirms and corroborates them in every particular. True, that in some points—e.g., in that of the lung conditions—present-day pathologists would use more definite phraseology, and in others they might expand and supplement the record; but the conditions described in the terms then in vogue are the same as those which happen now, although the nomenclature may be changed. The thermometric curves of the two affections are as sharply differentiated as are their other clinical features; but when Sir William Jenner wrote his essay the record of temperature of the body in fever was not a part of clinical routine. It is difficult nowadays to conceive how these fevers could have been confounded; it is easy to understand how their non-identity was finally accepted after so thorough an analysis and comparison of their symptoms and lesions had been made. Simultaneously with this publication there was read before the Royal Medical and Chirurgical Society by the same author a paper in which stress was laid not only upon the diagnostic differentiation but on the non-identity of the specific causes of these fevers and also of that of relapsing fever. This paper is a model of brevity and condensed argument. There is appended to it in the volume under notice a verbatim report of the discussion that took place on the occasion of its being read. The debate will be perused with interest as showing the opinions—some of them sounding quaint enough in modern ears—which were held by leading physicians of the day on this moot question.

Almost at the same time, but extending over a longer period in their publication, appeared the series of papers, dealing with the same topic, which appeared in the *Medical Times and Gazette*. They are collated here in the form of a single essay and are of value especially for the full clinical reports with which they abound. These were the notes of the cases observed by the author in the wards of the London Fever Hospital, which formed the basis of the writings previously alluded to. They illustrate most of the ordinary and the extraordinary features of typhus fever, typhoid fever, relapsing fevers and febricula; but of course they do not claim to be a complete survey of all that was known of these affections. The author was not writing a treatise on the continued fevers—that task was reserved for, and magnificently accomplished several years later by, Murchison; but these records bear the impress of close personal observation within a comparatively limited period of time.

In 1853, as one of the junior Fellows of the College over which he was subsequently to preside so worthily, Sir William Jenner delivered the Gulstonian Lectures. He took for his subject the Acute Specific Diseases, and the lectures, which are reproduced in the volume under notice, contain much that is suggestive and valuable. The mode in which the subject was treated was original, and in the second lecture an attempt is made to explain the variations of type met with in these affections. There are many points raised in the lectures which have passed from the region of controversy, and not a few that have received fresh and fuller elucidation. The period of forty years which has elapsed since their delivery has been fruitful in much additional knowledge of the nature and causes of these affections, so that the bent of thought in regard to them has altered and the view has widened. Nevertheless, these lectures have an interest other than one which is merely historical.

The address on the Treatment of Typhoid Fever, which Sir William Jenner delivered at Birmingham in 1879 and which was published in THE LANCET of Nov. 15th of that year, fitly concludes this portion of the work. Of that address nothing need be said in order to commend its re-perusal. It embodies the life-long experience of one who of all men was most fitted to speak on the subject.

The two lectures on Diphtheria, which were published in book form in 1861, are, we are glad to see, embodied in this volume. Their clear and emphatic style and the sound practical character which they possess make them of abiding value to the practitioner, although of course, in respect to the nature of the disease, as well as upon diphtheritic paralysis and other ailments, knowledge has advanced considerably since they were delivered. The practical lecture on Croup (in which Sir William Jenner confessed that his opinions as to the existence of an idiopathic membranous laryngitis had undergone modification), which was published in THE LANCET of Jan. 2nd and 16th, 1875, completes a volume which many will be glad to possess and from the perusal of which none can

fail to derive benefit. We are thankful to the esteemed author for sanctioning its production, and we are pleased to see that the publishers have spared no pains in order to produce it in worthy style.

Doctor Pascal, or Life and Heredity. By ÉMILE ZOLA. Translated by ERNEST A. VIZETELLY. London: Chatto and Windus. 1893.

WHATEVER may be thought of the subject matter of his twenty volumes of the Rougon-Macquart series, it is impossible to withhold from M. Zola the homage which the world spontaneously pays to the man of genius. Even here in England the proceedings of the last fortnight have shown that the people, as represented by the Press, acknowledge his talent whilst maybe regretting that the artist has dwelt so much on the seamy side of human nature in the unfolding of his painfully realistic record of the destinies of the family which he created; but the most fastidious and scrupulous critics can find but little to cavil at in the later productions of his pen, and now that he has completed the task to which he set himself twenty-five years ago the thoroughness and subtlety with which the whole history has been unfolded compel admiration. In "La Débâcle," the penultimate volume of this series, there were depicted with a rare fidelity the privations and misery of the campaign which ended in the fall of an empire and the humiliation of a great people. The reader must marvel at the courage which is shown by a writer, himself belonging to the country which endured this defeat, in laying bare the whole truth, careless of the charge that in so doing he is unpatriotic. M. Zola in all these writings has displayed this supreme indifference to the censure of the world. His aim—whether it has been a laudable one or not we care not to inquire—has been single-minded; he has concentrated his ideas upon the one central point of tracing the life history of a family stock of no reputable origin and showing in its successive generations more or less physical and mental degradation, moulded by the circumstances in which they were placed. In so doing he has revealed with unsparing candour much that is distasteful and abnormal in human life, but no one dare say that his sketches are not drawn to nature and that his fiction is not based on fact. In spite of the wonderful skill with which this has been done, the powers of description and word painting, the knowledge of human nature, the pathos of varied phases of life, the sensuality and brutality, the heroism and fidelity, evinced by the characters which he has drawn, and in a word the scientific method which he has imparted to a work of art, we cannot but feel that the whole history is a sordid one.

"Doctor Pascal," the work which concludes the series, contains and reveals the plan which the author had in his mind and which he has followed out so unswervingly. It has been translated most admirably by Mr. Vizetelly, and is well worth reading for its intrinsic interest and the rare fidelity of its sketches of character. Each individual stands out in prominent boldness: the doctor, whose ruling passion is the study of life and heredity, which has led him to accumulate all the details of the family to which he belongs; his mother, worldly wise and proud, detesting his labour in this respect and seeking every opportunity to destroy its fruits, an aim in which she only succeeds when he is lying dead in the adjoining room; the niece Clotilde, who worships the "master" and who gives herself up to him and enters fully into his life work, and whose child, the fruit of their union, is born six months after his death and is left to continue the family tree; the demented and aged progenitor of the whole family, "Aunt Dide," who dies in an asylum at the age of 103, having as sole companion the youthful Charles, the most physically degenerate of the series, who dies before her eyes from hæmophilia, the two extremes of the Rougon-Macquart stock being thus brought together at the close—these and many other characters are so clearly traced that they leave little to the reader's imagination.

We do not pretend, however, to pursue the plot of this remarkable work, but will content ourselves with referring to those points which touch more particularly on our own province. The question of heredity is one of the most prominent. It is that which the author has had in his mind throughout his prolonged and prolific labours, and it is discussed with great insight in the description of Dr. Pascal's researches and thoughts.

"Ah, that question of heredity; what a subject of endless meditation it supplied him with. The unexpected, the prodigious part of it all was that the resemblance of children to their parents did not prove complete and mathematical. He had at first drawn up a genealogical tree of his own family, in which, in accordance with strict logic, each parent from generation to generation was credited with an equal share of influence; but at almost every step the theory was upset by living facts. Heredity, instead of being resemblance, was but an effort towards resemblance, counteracted by circumstances and surroundings." (P. 31.)

Then we have his practice of injection of organic fluids and the success which attended it in cases of debility and nerve prostration. The material used by Dr. Pascal for this purpose was prepared by his own hands from the brain of the sheep (M. Zola has here no doubt in his mind the Pasteurian remedy for hydrophobia and has anticipated the "cerebrine" which has actually come into therapeutics), and it is told how the idea occurred to him to give it hypodermically and how he experimented on himself in increasing doses until—

"He was delighted one morning on getting up to find that his young legs had come back to him again. In this wise he increased the dose to five grammes, and then found that he could breathe more freely, possessed greater lucidity of mind, and could work with far more ease than he had known for years. .... And then....he was surprised at the favourable results which he obtained among his patients, whom he set on their legs again in a few days, as though he had endowed them with a fresh current of vibrating, active life" (p. 40).

But one day he inadvertently had the misfortune to cause the death by embolism of one of his patients whom he was treating for ataxy by this method:—

"No doubt Lafouasse could never have been cured, he could hardly have lived another six months and then only amidst atrocious sufferings; nevertheless the brutal fact—that frightful death—was there, and in presence of it the Doctor's despair was intense; all his confidence in himself was shaken, he was angered beyond measure with science—science powerless to cure and swift to slay."—(p. 139).

With consummate art the author introduces this episode at a time when, from other causes, Dr. Pascal was losing confidence in himself and his powers, and his gradual decline to the verge of the insanity which he feared, from his studies of his family history, might be his lot is powerfully depicted. At length he was persuaded to try upon himself the effect of his discovery, and thence dated his restoration to health (p. 154). The ultimate rejection by him of this new power is given in a conversation with Clotilde after he has won her and is looking upon life with other eyes:—

"Speaking in a faint whisper, as though he were timidly confessing some fault, he replied, 'Listen, I will tell you what I would not tell anyone else in the world, what I do not even acknowledge aloud to myself. Is it a praiseworthy task to correct nature, to intervene, modify it and seek to turn it from the purpose it has in view? To cure, to delay the death of any human being, simply for that being's personal gratification or advantage, to prolong his life to the detriment no doubt of the species as a whole—is not this undoing all that nature seeks to do? And, moreover, have we the right to dream of a healthier, stronger humanity, modelled in accordance with our ideas of health and strength? Why attempt the realisation of such a dream—what business have we to interfere in the labour of life, whose ways and whose purposes are unknown to us? Possibly all is well as it is. Possibly we run the risk of destroying love, genius, life itself .... Do you know, very often in puncturing my patients I now only inject water. You yourself have remarked that I prepare no nervous matter for days and days together. I told you that I had some *liqueur* in reserve. Well, water alleviates their sufferings—the effect is doubtless simply a mechanical one, still there it is' ...."—(p. 197.)

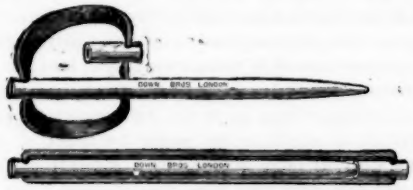
In a book which abounds in dramatic episodes there are three which are especially striking. One is the death by burning of the drink-sodden "Uncle Macquart," whose tissues are so drenched with alcohol that he catches fire from his pipe which had dropped out of his mouth in a drunken sleep. Readers will recall the similar episode which Dickens introduces in "Bleak House," and the reference to records of

"spontaneous combustion" which that genial novelist makes in his preface to the novel. We do not know what is M. Zola's authority for the possibility of such an occurrence, for he is not usually prone to exercise the licence accorded to writers of fiction (p. 205). A few pages further, and in marked contrast to that terrible event, there is detailed with painful minuteness the gentle ebbing away of life from epistaxis of the youthful and hæmophilic Charles seated at a table opposite to his great-great-grandmother, who is roused from the mental torpor of years by the scene before her eyes and with one lucid interval and return of memory succumbs to the shock she thereby receives. But to our thinking the most striking of all the situations in the book is the description of the death of Dr. Pascal from angina pectoris, which is too long to quote, but which shows how the man's will-power strove against the physical suffering and exhaustion of each successive attack, and how with the ruling passion strong in death the dying man nerves himself to supply in his genealogical tree the date and mode of his own death, and to record the advent in the following year of the "Unknown Infant to be born in 1874. What will it be?"

New Inventions.

CLAMP FOR OCCLUDING THE GUT IN INTESTINAL OPERATIONS.

I HAVE devised a little clamp for occluding the gut in intestinal operations, and I have found it so simple and efficient that I think many will adopt it in preference to other instruments. It will be seen by the illustration that it consists of a metal rod, to one end of which a rubber ring is attached, whilst the other end is sharply conical, and connected with the opposite end of the rubber ring is a metal cap which fits the conical end of the rod. The sharp point of this rod is passed through the mesentery and behind the gut; the rubber ring is then drawn down over the front of the bowel



and the cap is fixed on to the conical end. By this means the bowel is absolutely occluded, being folded against the metal rod and compressed between it and the rubber band on either side. The coats of the bowel are absolutely unaffected by the very slight pressure which they sustain, and there is no risk of the clamp slipping or being displaced from its position. I have used this method in a clamp of my own construction for some time; the one shown is slightly modified to allow of easy removal of the rubber ring and thorough cleansing. It has been made for me by Messrs. Down Bros., St. Thomas's-street, S.E.

St. Thomas's-street, S.E. W. ARBUTHNOT LANE.

IMPROVED BIFOCAL SPECTACLES.

WE have received from Mr. Head a paper which gives a description of a modification of the ordinary well-known Franklin or bifocal lens adapted for the use of those who are sufficiently long- or short-sighted to make the constant use of glasses almost a necessity. The paper appears to be a lecture giving a popular account of the formation of images on the retina in the normal eye and of the conditions present in hypermetropia and myopia. In the higher degrees of each defect a different glass is required for near and for distant vision, which in the Franklin lens is supplied by joining two lenses of different power in such a way that on looking up the patient looks through one glass, and on looking down through another. The objection to this arrangement is that the line of junction passes horizontally across the middle of the field of vision. As a matter of fact, a larger field is found to be advantageous for distant vision, and a smaller one for reading or for near objects generally. The difficulty has been partly surmounted by guiding the same glass with a segment of smaller area in its lower as compared with its upper part, which does away in great part with the sharply defined line of union of the two lenses. Mr. Head believes that he has made a still further improvement by cementing on the lower part of the glass a second supplementary disc or ellipse of glass, by means of which the desired power may be obtained. The reading lenses are thus reduced to a minimum of size and he claims for such glasses that they afford a greatly increased and much more complete field of vision for distant objects. The glasses can be obtained from Mr. Baker of High Holborn.

CHOLERA IN MANCHESTER.

To the Editors of THE LANCET.

SIRS,—In consequence of the appearance in the local press of erroneous statements as to the prevalence of cholera and choleraic diarrhœa in Manchester I think that it is desirable to intimate that during the week before last there occurred here a few cases of severe bowel illness, which were attended by collapse and other alarming symptoms. In consequence of the presence of undoubted cholera at certain seaport towns in daily communication with Manchester every attack of choleraic diarrhœa which has occurred here in an adult has been treated as suspicious. The same careful investigations as to its origin and the same rigid precautions against its spreading have been practised that would have been resorted to had every attack been recognised from the first as one of Asiatic cholera. In these investigations I have had the advantage of the help of my colleague, Dr. Delépine, Professor of Pathology at Owens College, who has examined bacteriologically all the discharges, bowel contents &c. in the cases which have been regarded as suspicious since the occurrence of the first known attack in Manchester. In three of the four cases bacteriologically examined (two of which are believed to be traceable to infection from Grimsby) the result of careful examination has been to show that the disease was cholera. Two of the patients have unfortunately died, and I am indebted to my friends Dr. Orchard, Dr. Paton and Dr. Sutherland for kindly undertaking the necessary necropsies on my behalf. The remaining patient, who is advanced in life, is apparently recovering, although she still remains extremely prostrate. The circumstances of a fourth suspicious case, which rapidly proved fatal, are under investigation, and the result will, I trust, be definitely known in the course of another day or two. From the evidence, however, which Dr. Delépine has obtained up to the present time he inclines to the belief that the disease in this instance was not true cholera.

It is much to be regretted that the Manchester public suffer themselves to be misled by the circulation of unauthorised and sensational reports respecting the local prevalence of cholera. In the improbable event of cholera becoming seriously epidemic amongst us the public will be kept duly informed by means of the ordinary weekly health returns, which are widely circulated in the city, and reliable information on the subject can always be obtained at the Public Health Office. At present there is nothing of the nature of an epidemic of cholera or of choleraic diarrhœa in Manchester and no fresh case of a suspicious character, has been reported since the beginning of last week. The few cases hitherto reported have been sporadic in character, and every known precaution has been taken to prevent the spread of infection from the persons attacked. During the last four weeks the deaths from infantile diarrhœa have grown steadily fewer week by week, the deaths from that disease last week having fallen to only one-third of the average weekly number registered during part of the month of July last.

I am, Sirs, your obedient servant,

JOHN TATHAM.

Public Health Office, Town Hall, Manchester, Sept. 25th, 1893.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 30, 1893.

THE report of the Royal Commission on the Metropolitan Water-supply issued last week, a digest of which will be found in another column, is an addition of distinct scientific value to the series of Parliamentary Blue-books. The subject of water-supply is one, of course, of vital interest and one which directly affects the well-being of the community, and it is therefore not surprising that the proceedings of the Commission have been watched with equal eagerness by the technical as well as by the general public. The report occupies over seventy pages, of which the greater part deals with statistics bearing on present population and supply, future area of supply and population, estimated future consumption, future requirements and the probable yield of water from fresh sources. None can dispute the standing and the competency of the witnesses who gave evidence on these points. It was this branch of the inquiry and more particularly the question of obtaining an increased supply from the chalk formation that gave rise to the most vigorous discussion throughout the sitting. Mr. BINNIE, the engineer to the County Council, with whom were Mr. URBAN SMITH, Mr. HOPKINSON, Mr. WHITTAKER and Sir JOHN EVANS, contended that whilst an additional supply could be obtained from the underground wells in the valleys of the Lea and elsewhere it would be at the expense of the water level in the valleys and would reduce the flow of springs, would effect the drying-up of water meadows and of watercress beds, the lowering of water in wells, the decline of volume of rivers, the lowering of water in boreholes made into the chalk and the drying-up of river-heads. These assertions were of so serious a nature as to justify the Commission in instituting an independent inquiry, from the result of which there appeared to be no reliable evidence of the permanent depletion of any well or of the permanent lowering of the source of any river. Eventually the Commission decided that an additional quantity of water was procurable without affecting the existing source of supply from the chalk areas. They similarly concluded that an increased supply could be obtained both from the Lea and the Thames by the construction of storage reservoirs without seriously affecting the normal flow of the rivers. From the sources and the methods thus decided upon it is calculated that a daily supply of 420,000,000 gallons of water could be obtained. This is regarded as a sufficient quantity to supply 35 gallons a head to an estimated population in 1931 of 12,000,000 persons. These are technical problems of fundamental importance, which, however, do not obviously come within our province to discuss. We may therefore dismiss them with the assurance that they will be adequately dealt with by the eminent engineers and geologists who gave evidence before the Commission. The section of the report dealing with the quality of the water-supply to London is valuable, not because it merely embodies the evidence of experts, but because it is essentially an excellent and important contribution to chemical and bacteriological science. We can absolutely take little or no exception to the theoretical considerations which are clearly set forth by the Commissioners. We agree that the question of the quality of water for drinking puposes has passed to a very considerable extent from the domain of chemistry to that of biology, but we also contend that although in the past analysts were wrong in drawing hard and fast lines as to the fitness of water for drinking purposes, based upon chemical results, yet the organic matter found by the analyst affords sufficient ground for suspicion, seeing that the same channel by which innocuous organic matter has made its entrance may also serve for the introduction of less innocent materials. One of the most remarkable facts emphasised in the report is that both chemical and biological examination have failed to furnish the slightest evidence that the water as supplied to the consumer was in any degree objectionable. Search even in raw river water for pathogenic organisms, particularly for the typhoid and cholera bacilli, has utterly failed, although steps were taken to collect the deposit of considerable volumes, first, by means of the porcelain filter, and secondly by examining the gelatinous accumulation of the companies' filters. The evidence of experience confirms these observations, for according to the testimony of medical officers of health, water analysts, and bacteriological experts given before the Commission, no disease traceable to the consumption of water has occurred in London within the last thirty years. This is indeed a matter for congratulation, but none the less should we fail to inquire into the conditions which have brought about so satisfactory an issue. Apart from the various conditions and agencies that lead to the destruction or elimination of pathogenic organisms during the flow down the river, there can be little doubt that the subsequent processes of subsidence and filtration, *when properly carried out*, effect a purifying process the nature and extent of which have hitherto been but little understood. This being so, the recommendations enjoined by the Commissioners as to the enforcement of certain regulations in regard to the proper treatment of water, by filtration or other process, by a specially appointed authority will meet with unanimous approval. We have frequently pointed out the occasional failure of some of the companies to filter their water in a thoroughly satisfactory degree, and we observe with satisfaction that this defect has not been overlooked by the Commission. Sand filtration has been shown to be so effectual in the chemical as well as bacteriological purification of water, that it would be little short of a criminal proceeding on the part of the authorities if they permitted for one moment any negligence in any single particular in regard to the proper working of the filters. Lastly, there is the question of the liability of our water-supplying rivers to pollution. According to one witness the Rivers Pollution Prevention Act has been more or less a dead letter, filth of all kinds having been discharged indiscriminately for years into the rivers. The pollution of both the Thames and the Lea from this source is a matter of common knowledge, and it is to be hoped that the measures recommended by the Commissioners to remedy this state of things will be effectually adopted. In this connexion, however, one fact for serious consideration remains. Whilst the Commissioners have calculated to provide for the supply of

water to 12,000,000 people some forty years hence they do not appear to have considered the enormous increase in the amount of sewage that must take place and which will be discharged into the metropolitan rivers in 1931, assuming that no better method of disposal, not to speak of utilisation, is forthcoming. It must be borne in mind that the failure to dispose of sewage through any other channel except that of a river is a factor which must always contribute towards placing our river water supplies in jeopardy. It is impossible in the space at our disposal to deal with all the points at issue in the report, but it will be seen that the results are on the whole of a reassuring character—a fact upon which the citizens of London may be congratulated, since it appears that they have had in the past a supply of water free from reproach as regards quality, and according to the conclusions of the Commissioners may confidently look for an adequate and pure supply in the future. The question of a pure and adequate supply in the future depends, however, largely on the fulfilment of certain conditions which the Commissioners have prudently laid down, conditions which we trust will be speedily carried out and maintained.

THE LANCET would be untrue to one of its most honourable traditions if it failed to bring under the notice of the profession the noble work achieved from time to time in the far East, in Equatorial Africa, and indeed in all the remoter haunts of retrograde humanity, by the yearly augmenting band of missionary pioneers who are also duly qualified medical men. Now it is in the interior or on the littoral of China, now in the hill country round Lake Nyassa, that we hear of the progress made by these devoted men in elevating the savage or benighted populations to the standards of the West. No sooner does one of them sink in some generous enterprise than another fills his place and carries on the work to be in turn transmitted to an equally well-inspired successor. Recent mails have been unusually rich in such examples, and a brief record of the harvest reaped by these "husbandmen of humanity," with some notice of the means employed and of the men themselves, claims an appropriate niche in a journal from which the due commemoration of medical merit has at no time been withheld. Dr. DANIEL JEROME MACGOWAN, whose parents emigrated from Ulster to North America shortly after the War of Independence and who was born in Massachusetts in 1815, was for fifty years a medical worker in the field marked out in China by the Southern Baptist Mission. In the course of his life-long exertions he did much to bring the Chinese world into more sympathetic *rapprochement* with that of the West, and in the course of the discharge of the duties connected with his special occupation he was enabled to obtain a profound knowledge of the institutions, the character, the customs and the history of the strangely gifted and perversely governed people amongst whom his lot was cast. His researches found frequent expression in periodical and permanent publications, and these so impressed his British fellow-workers with their thoroughness and practical usefulness that our Foreign Office gave him a responsible post at Wenchow, whence he continued till within a few months of his death to enlarge the stores of knowledge, scientific and historical, which he had already amassed. An expedition which was undertaken to North China and the Great Wall in his seventy-ninth year proved to be beyond his strength, and on his return he was so enfeebled that he passed away peacefully on July 21st. Not only China, but Siberia and Japan, were included in his explorations; whilst his papers, embodying the scientific result of these efforts, will long be remembered as being honourable alike to the cause in which he compiled them and to the branch of the profession to which he belonged. A worthy successor in his footsteps, Mr. WILLIAM PIRIE of Arbroath, entered on the same career two years ago, and he was even thus early acquiring an exemplary reputation for ability, energy and self-sacrifice, when, as an intimation which has lately been received by the Church of Scotland Foreign Mission Committee tells us, he succumbed at Tchang amidst the deep regrets of the people amongst whom he worked and the friends who had watched his success. Information which has come recently to hand enables us to supply some not less ennobling companion pictures to those which we have just outlined. Central Africa, particularly around the shores of Lake Nyassa, is the scene of medico-missionary operations by the emissaries of British societies which extort the admiration of the representatives of those foreign Powers—notably the German—who are engaged, though with other objects, in those regions Dr. ELMSLIE, who for some years has been actively occupied in reclaiming the Zulus of the Ngoni Mountains, in which he has been effectively aided by Dr. STEELE of the Livingstonia Mission, has recently brought back to Bandawe, on the western shore of the lake, the most encouraging report of progress which has been made, with still more in prospect. British civilisation, we further learn, is acquiring a strongly riveted foothold at Bandawe, where dwelling-houses are being built on a considerable scale and the nucleus of a prolific "centre" is being established. Dr. CROSS, at the northern extremity of the lake, is also doing admirable work, coöperating to good purpose in that suppression of the slave trade in which the German agents are succeeding "hand over hand." We might record in our columns many other narratives of thrilling adventure and successful daring on the part of our medico-missionary pioneers. Year by year those devoted men are proving to an over-populated and inadequately provided Europe the sphere of profitable and even pleasurable life-work which has been opened up in the Dark Continent, and before the end of the century we may witness a steady and effective relief of the crowded centres of the Old World by the transference of their surplus population to regions far more tolerable as to climate and life conditions generally than are the island or mainland tracts of North-western Europe. In this imperious necessity of our over-burdened State system the resources revealed and developed by such agents as those whose labours we have alluded to, reinforced as they are almost from month to month by generous and fully equipped auxiliaries, must be welcomed as a prospective solution of the social and administrative troubles which show every tendency to become aggravated—a solution provisional, it may be, but none the less opportune, till such time as the legislative machine, lightened and improved, can work out the proper remedy.

OUR readers will remember that in a leading article in THE LANCET of May 6th of this year we directed attention to a serious change in the rules of the Coventry Provident

Dispensary. The dispensary is one of the oldest, as it is one of the most prosperous, of its kind. It was begun as a benevolent institution. As its only surviving founder has observed, it was instituted for the benefit of the working classes, and was intended to supply them with immediate relief when stricken with illness and to moderate the expense of medical attendance. He rightly added that both of these objects were of a "philanthropic" nature, and instanced in support of this that £5000 had accumulated as the property of the dispensary. Unfortunately, as we pointed out in May, the essentially benevolent character of the dispensary has been altered by the making of the following rule: "That this meeting resolves that, the dispensary being a self-supporting institution, the pecuniary position of an applicant for membership shall in future be no bar to admission." It is not our intention to discuss at any length the logical strength of this rule. It is vulnerable at every point. How can an institution which was benevolently founded and is benevolently supported be called a "self-supporting" institution?

We revert to the subject from another point of view—viz., the duty of the members of the medical profession in a town where there is such an institution, and where its supporters pass a rule to enable it to be turned to purposes which its founders did not contemplate. The medical men of Coventry in December last found that of the 52,000 people in Coventry 26,000 were in the Provident Dispensary, 4000 were hospital patients, 2000 Poor-law patients and about 10,000 in various clubs; that the remuneration of the dispensary staff amounted to 1*s.* 4*d.* per member per annum, and that a large number of well-to-do people were members of the dispensary. They convened a meeting of "the whole profession" on Dec. 10th and passed resolutions declaring that some method of medical reform was expedient, that the introduction of a wage limit system as applied to medical contracts should be the measure of this, and that a committee should be formed to decide on the means to give effect to the resolutions. Three members of the medical staff of the dispensary were present and supported these resolutions, but some report of the proceedings appeared in a contemporary representing the dispensary staff as "unable and unwilling to effect reform." This naturally gave much offence to that staff, who had exhibited their sympathy by attending the meeting and voting in support of the wage limit, and although at a meeting of the profession disapproval of the report was expressed they have since refused to serve on the committee. Here is an acute difference in the profession over a matter on which there should be none, and we gather from the correspondence sent to us that, although months have passed since the annual meeting of the dispensary, there is no abatement of this controversy nor any prospect of it. We neither wish nor intend to say a word that might add to the difficulty of an understanding and of common action on this matter. Common action is what is required. The members of the dispensary staff think they can better serve the cause of medical reform by holding aloof. This does not quite accord with their coöperation in the first instance, or the statement that they are in sympathy with reform. But to one request they should accede—viz., to submit to arbitration the questions between them and the majority of the profession. So far they have refused to do this, and hence the deadlock. The matter is important, not so much with reference to the rules of a particular institution, but to the far larger subject of the solidarity and harmony of the profession when its honour and its interests are concerned.

Annotations.

"Ne quid nimis."

THE ANTIQUITY OF MEDICAL DEGREES.

THE celebration, five years ago, of the eighth centenary of the founding of the University of Bologna gave fresh prominence to the fact that she is not only the "mother of seats of learning," but also of academic degrees. It was in the faculty of law that she first conferred the honour of graduation, "Doctor Legum" being the title to which Irnerius, the regenerator of the Roman juridical system and the virtual founder of the Bologna school, "promoted" the "alumnus" who had attended the prescribed courses and passed the qualifying ordeal. Paris, still in the faculty of law, imitated the example of her Italian sister, whilst not till a century later did England follow suit. Medicine having, like law, assumed the dignity of a "faculty," began also to give the title of "doctor"—a word which is met with in that connexion as early as the first century, when Suetonius relates of Julius Cæsar that he invested with the rights of Roman citizen "omnes medicinam professos et liberalium artium doctores." From the earliest times the practitioner of an art—particularly that of medicine—was looked up to as its teacher; and so when the healing art, incorporated in the university system, handed on the torch of "light and leading" to its disciples it did so by "promoting" them from "alumni" to be "doctores," equally qualified to practise and to instruct. Gradually those who made teaching or lecturing their business, to the exclusion of practice, came to be called "doctores legentes," whilst conversely those who practised but did not teach were designated "doctores non-legentes"—"doctor," however, being always the title they shared in common. As time went on the former appropriated to themselves the name of "professores," which (as we have seen from Suetonius) implied not only the ability to teach but also the daily practice of medicine—the latter being a tradition maintained in the Italy of to-day, where the consultant physician is popularly addressed as "professore." The precise date at which the medical degree was for the first time bestowed, as well as the seat of learning that took the initiative in its bestowal, is one of those *quæstiones vexatæ* on which the historian of universities has not yet said the last word. The latest announcement on the subject gives to Asti—a sub-Alpine school of considerable repute in the Middle Ages—the priority over all others in granting the degree of Doctor of Medicine, and makes one William Gardenia, of uncertain nationality, the recipient of the same. The year is fixed with something like authenticity (1329); but we shall not be surprised if Asti's claim to this honour is strenuously challenged, particularly by the German investigators of university annals—a branch of historical research which is adding to its *matériel* every day. Meanwhile an instructive essay might be written on the thesis, "To what extent was the 'doctor' indebted to the 'discipulus'?" In ancient and mediæval times, before there was an all-observing, all-recording medical literature, the spoken word was the channel of communication, and the attitude of teacher to pupil was that of one who gained by the connexion almost as much as he imparted. The saying of the famous Oxford

prælector, logician and divine, Bishop Sanderson—"I have learned much from my masters, more from my equals, but most of all from my disciples"—puts in aphoristic form the experience of all great clinical preceptors, from the Father of Medicine downwards, and even at the present day the clinical instructor in more than one British or Continental school has borne testimony to the fact that in digesting his theories and in reducing them to undergraduate comprehension, he has purified them, often strengthened them, and always improved them, to his own mental advantage as much as to that of his pupils. "Docendo discimus," the ancient adage, has its Italian counterpart, "Insegnando s'impara"; and what holds good of the spoken is not less true of the written word. The practitioner who commits to writing, with a view to publishing his experience, is in a similar sense a "doctor" or teacher, who, in the effort to make his views clear to his brethren of the profession, sifts and clarifies them till they acquire in his own mind that title to acceptance which he has been at pains to earn for them in the minds of his readers. In this way the "doctor" maintains the noble traditions of his classical or mediæval prototype; he is still the "teacher," and like all benefactors, such as the teacher is, whether by tongue or pen, he finds his reward. "It is more blessed to give than to receive" is true in its original application; and it is not less true on account of the fact that in the giving there is also a receiving which brings a blessing of its own. Such has been the experience and such the inspiration of the great masters of the profession in all countries and in all ages, whether their medium has been the class-room or the Press.

VIRCHOW AND MOMMSEN IN THE ETERNAL CITY.

A CORRESPONDENT writes:—"Quite recently the greatest of living pathologists received jubilee honours at the hands of his friends and admirers in London, and now the greatest of living historians and archæologists is about to be the hero of a similar demonstration in Rome. 'It takes three *savants*,' was the genial remark of Professor Huxley on the former occasion, 'to do justice to the merits of Virchow,' and on the same principle the forces of intelligent appreciation are being summoned from every quarter to do equal justice to Mommsen. It is this latter motive that doubtless explains the presence in Rome of the illustrious pathologist, who will from the medical side set forth the obligations of the profession to his no less illustrious friend and colleague. As is the case with all commanding intellects, even in fields apparently so divergent as literature and medicine, a leader in one is always eager to acknowledge obligation to a leader in the other; nor is opportunity ever wanting. One difficult problem in such researches as those of the Roman archæologist is the gradual elevation of the soil—the Forum Romanum, for example, being now some thirty feet above its ancient level. Many explanations—none of them conclusive—of this phenomenon were hazarded, till Darwin, in one of his latest studies, proved the part wrought by worms year by year through long ages, in heaving up the earth till its modern height no longer coincided with its antique level. 'I raise my hat to Darwin,' said an Italian excavator when he had satisfied himself of the truth of this induction. On the other hand, it is to Mommsen and his marvellous achievements in epigraphy that we are indebted for some of our most instructive glimpses into the *vie intime* of medical antiquity—our knowledge of physicians under the Empire, for example, the positions of trust they filled, the fees they earned and the fortunes they realised, being greatly enhanced in minuteness and in accuracy by the inscriptions he has brought to light. By a happy coincidence the leading consultant and municipal councillor in Rome is himself in a great sympathy with Mommsen's archæological studies as he is with Virchow's pathological studies, and in the hospitality of Dr. Guido Baccelli both the Berlin *savants* will find much to gratify their special tastes and the predilections of their leisure. As Minister of Public Instruction Professor Baccelli gave a vigorous impetus to the excavation of the Forum where it abuts on the Palatine, with the result that the House of the Vestal Virgins was unearthed and our knowledge of their domestic life extended in unforeseen ways. He also devised the 'Passeggiata Archeologica'—or archæological promenade—not yet *un fait accompli* for lack of funds, but quite capable of being followed out and enjoyed through all its interesting windings under skilled and sympathetic guidance such as his. The imagination dwells with pleasure on the meeting and the intercourse of three such men on a spot so hallowed by mighty traditions—traditions which owe much of their elucidation to the efforts of the scholars of Germany working in concert with Italians who are proud to own themselves their disciples. The tightening of the bonds that now connect the Teutonic and the Latin civilisations is not the least gratifying result of such celebrations as that about to be solemnised in honour of Theodor Mommsen, all the more when the participators in it are drawn from professions so widely apart as those of literature and medicine—professions which respect each others pursuits as conducing to the one great end of deepening and elevating the world's knowledge by the appreciation of its past and the ennobling of its future."

DEATHS UNDER ANÆSTHETICS.

AMONGST recent fatalities may be noticed one under chloroform, which took place in Guy's Hospital. A patient aged fifty-two was admitted under the care of Mr. Brailey, ophthalmic surgeon to the hospital, for the relief of cataract affecting both eyes. On Sept. 5th, at the patient's own request, chloroform was administered to him preparatorily to an operation for the relief of the cataract. He had taken chloroform well upon a previous occasion. The first symptom noted was lividity, and cessation of respiration immediately followed. One drachm and a quarter was given in all. A death under ether occurred at the Leeds Infirmary on Sept. 13th. The patient, a poorly nourished, nervous man aged fifty-two, suffered from carcinoma recti. On Aug. 30th he was put under ether and inguinal colotomy was performed. On Sept. 13th, with a view to excising the diseased bowel, ether was again administered; no struggling or untoward symptom occurred for half an hour, when respiration ceased for a short time, but was then resumed. However, after a few minutes of tranquil breathing respiration again ceased and the patient became dusky and finally cyanosed. Artificial respiration with the inhalation of solution of ammonia appeared to revive him and he began to breathe well, the cyanosis passing off. Up to this point no heart failure was evidenced, but the pulse now suddenly became extinguished, respiration ceased and the countenance became livid. Artificial respiration was recommenced and brandy was injected subcutaneously, but the patient did not breathe again. The ether was given from a Clover's small regulating inhaler; a little over two ounces was administered during the thirty-five minutes which elapsed from the commencement of the inhalation to the final catastrophe. The necropsy revealed some basal congestion of the lungs, old adhesions and old mitral valvular disease; there had also been albuminuria during life, but only slightly. Fortunately deaths under ether when it is carefully given according to reliable methods, as in the present case, are very rare. The facts of the case appear to point to failure of vitality; the extremely exhausting character of the disease and the fact that he had already undergone one major operation

had no doubt taxed his strength too severely for the slight additional strain imposed by the anæsthetisation to be borne with impunity. Such cases are *par excellence* the cases for the use of ether, and as a rule that anæsthetic is able to tide the patient over the shock incident to the operation. We are not told the condition of the patient's arteries or whether the brain and cord were examined. The usual way in which ether kills, when it does so, at the time of administration is through mechanical impediment in breathing, as by excessive secretion of mucus or by paralysis of the respiratory centre following excessive dosage with chloroform and imperfect air-supply. In the case under review none of these dangers presented themselves and the method adopted effectually safeguarded the patient alike from over-dosage and from oxygen starvation. A report of a further death under chloroform lies before us. This time the patient was a child aged nine who died at Lindley. The surgical evidence states that the child had a growth in its throat which interfered with her breathing (? post-nasal adenoid growth). The girl took the chloroform well for a minute and a half, and then began to cough violently. The administration was stopped, and, as the breathing failed, artificial respiration was adopted, but without success. The child was said to have no fear of the anæsthetic. We are inclined to think that it is unwise to use chloroform in these cases of post-nasal adenoids, especially where much obstruction exists.

THE PRIMARY ACTION OF THE GALVANIC CURRENT.

DRS. J. MOUNT BLEYER and M. MILTON WEILL of New York City have experimentally investigated the influence of the galvanic current in promoting the formation of ozone in the blood, and they express their belief in the fundamental importance of animal electricity in respect to the chemical actions of living organisms. In a communication which has been submitted to us, after giving an interesting *résumé* of our knowledge of the nature of ozone and its occurrence in the blood, and discussing generally the physiological and chemical factors bearing upon their investigation, they relate the steps taken by themselves and the results attained by their inquiry. In order that the tests for ozone might be applied "in the open"—that is, in the free air of the laboratory, rather than in Schmitt's balloon—the inquiry was not undertaken until it was satisfactorily proved that ozone and nitrous acid, the presence of which would have invalidated their conclusions, were absent or only present in a negligable quantity. The blood selected for examination was taken from the carotid arteries of healthy rabbits. The blood serum, as well as the fibrinous clot, gave well-marked ozone reaction, and the latter owing to the entangled red corpuscles more distinctly than the former. A galvanic current of ten volts and fifteen milliampères sent through the fibrinated blood notably increased the amount of ozone. Although a quantitative test could not be well applied, Dr. Dittrich and the investigators approximately determined that the amount of ozone after electrisation was increased about two and a half times. So much for their results obtained from extravasated blood. A current of a strength of forty milliampères was then passed through the body of a healthy rabbit for five minutes and blood from the carotid arteries tested for ozone. The investigators and Dr. Dettrich satisfied themselves that the reactions indicated a considerable increase in the quantity of ozone over that obtained from normal blood. From this result it is concluded that the polarising action of animal electricity has an important influence *in corpore* in promoting the evolution of ozone. The writers conclude their interesting paper by some general remarks upon animal electricity, which they are disposed to regard as "the prime factor in all the processes of change of chemical action or otherwise within the living body." Careful as were the methods adopted by the investigators, and interesting as are the conclusions which they consider themselves justified in drawing, there are too much enthusiasm and too much generalisation in their work to convince us that their position will prove scientifically unassailable. Nevertheless, we regard their contribution as a valuable addition to our knowledge of a most important subject.

THE WANT OF LIGHT IN PUBLIC CONVEYANCES.

THE great companies that carry the travelling public, whether in omnibuses or in railway carriages, display a very inadequate sense of their duty in the matter of providing light. Last year it seemed as though the General Omnibus Company was about to set an excellent example. It introduced the electric light into the centre of the omnibus, instead of the oil lamp at the door that only seemed to make the gloom of the inside more depressing. At first it seemed as if the passengers would be able to beguile the time by reading newspapers or books; but the light has become small by degrees and is altogether inadequate for any such pleasant purpose. On the railway lines, with but few exceptions, the same semi-darkness reigns. The Midland Railway, we believe, has a few trains on the main line fitted with the electric light; but we lately travelled about twenty miles in practical darkness. The Great Northern Railway has attempted to do its duty in this matter in some trains, but has receded rather than advanced in the attempt. The South-Eastern Railway has tried the slot system in some of its trains, and for one penny the passenger could get half an hour's light to read by, but on the whole the companies favour darkness rather than light. We protest strongly against the persistence in this state of things as one altogether out of date. Men and women spend too much of their time now in travelling for this to be tolerated. Our protest is in the interest of the public and of the eyes of our patients, but the interest of the railways and the omnibus companies would also surely be served by the reform, and we strongly advise the public to patronise the company that is most generous in the matter of providing efficient light.

THE PAYMENT OF MEDICAL ASSISTANTS.

THE case of medical assistants was lately stated with much force and, on the whole, with much justice in the pages of a contemporary. We are not prepared, indeed, to agree that such remuneration as £120 per annum is ordinarily too small to recompense the duties of assistantship. Commercial juniors of the same standing as the newly-made practitioner claim no more, if as much, for their services. It should be remembered that in either case these earlier earnings are in some degree the wages of a learner; some reduction of a higher ideal standard must be allowed as the premium of inexperience, as the work done is, or should be, lightened of much responsibility by the vigilance of a superior, and the emolument allowed is sufficient for a young single man. It is, however, where older men, married and with families, hold the same position that the hardship of scanty means is really felt. In such cases and under present social conditions an income of from £2 to £3 per week is indeed absurdly inadequate. The same may be said of some locum tenencies which offer no larger sum to the holder for a fortnight's work, and this, too, presumably, for work done in the absence of a principal. Such instances of under-payment are to some extent the outcome of other evils. Amongst such we may include the system of branch practice. This system cannot always be avoided, but it compares unfavourably with such *bonâ-fide* practice as is implied in the active headship of a principal who is assisted in emergencies by a qualified junior, and this arrangement, we take it, best illustrates the fundamental

character of their joint relationship. Another evil is the costly method still pursued in general practice in consequence of which the net value of a practice is by no means represented by its return in fees. Thus, of an income of £1000 per annum at least a tenth may have to be deducted on account of drugs and other "surgery" expenses and driving outlay will consume another sixth, whilst dissolutions of partnership entail special burdens. Rent and other necessities draw their quota, so that no sufficient sum can be spared for an assistant's salary. A little consideration might render possible a reduction in the chief items of expenditure and so enable the principal to remunerate a good assistant more liberally.

THE PREVALENCE OF FEVER.

THE incidence of scarlet fever has shown a slight rise during the last few weeks. The metropolis continues to furnish less than one-half of the total cases reported in the large towns. Liverpool, West Ham and Leicester continue to contribute the greatest number of cases. The authorities at the latter place are being greatly exercised as to their hospital, the nature and administration of which have been the subject of active protest and remonstrance on the part of the public at Leicester. In the meantime scarlet fever is reported to be spreading alarmingly in the town and to be inadequately isolated at the hospital. Though diphtheria is lessening throughout the kingdom, the large proportion contributed by London still maintains itself, being equal to nearly three-fourths of the total. This disease has appeared in virulent form at Stoke Golding, a small Leicestershire village. Enteric fever maintains its autumnal prevalence, though it has shown signs of declining during the last week or two. Outbreaks of this disease are reported from the neighbourhood of Bradford and in Linlithgow. Returns from the London fever hospitals indicate that the total numbers under treatment show a distinct diminution, as do the numbers of the several diseases admitted. The prevalence of diphtheria, however, in the metropolis is much above the average, a fact which should engage the attention of the central authorities.

"ANTISEPTICISM AND EDINBURGH SURGERY."

A CORRESPONDENT sends us the following: "'For clean, aseptic surgery go to Hamburg or Glasgow; for dirty surgery go to Edinburgh.' This short and pithy advice, the dictum of a famous Glasgow surgeon, was given to a circle of medical men on the deck of a Leith and Hamburg steamer in the summer of 1890, when the whole medical world seemed to be doing the pilgrimage to Berlin. As the group was composed almost entirely of Edinburgh men the above remarks were greeted with a shout of laughter; nevertheless, there may be something in the statement to which Edinburgh surgeons may well give heed, particularly as the recent American testimony (that of the 'intelligent foreigner,' which is supposed to foreshadow the deliberate conclusion of posterity) points in the same direction. In all seriousness, it is perhaps not to be wondered at if a belief in the fundamental principles of 'Listerism' has taken deeper root and borne better fruit in Glasgow than elsewhere. Without faith in the germ theory of putrefaction as the guiding principle, the endless variation in the details of antiseptic treatment and dressings is apt to bewilder rather than to edify; and it is constantly noticed that those who are not governed by this belief find the exact and detailed observance of antiseptic precautions tedious, lose patience in the application of the system and therefore come far short of the thoroughness of the practice of those who have accepted Sir Joseph Lister's gospel enthusiastically and in its entirety. Now most of the surgeons at present in Glasgow were trained under Sir Joseph Lister and had the advantage, in the Glasgow Royal Infirmary, of following and even of intelligently helping in the gradual development of his system from its inception (in the days when compound fractures were embedded in a mass of 'carbolic putty') to its triumphant success under the steady influence of one ruling and informing idea, but with a constant seeking after better means of applying that idea. A training such as this makes more thorough-going disciples than does the presentation of a completed and well-rounded system and of an already accepted and successful practice. The part played by Glasgow, and especially by the Glasgow Royal Infirmary, in the evolution of antiseptic methods—an evolution which was practically complete before Sir Joseph Lister went to Edinburgh in 1870—is one of which Glasgow men are reasonably proud, though it is too often forgotten by others. In the 'Life of Pasteur,' for example, written by his son-in-law, translated by Lady Claud Hamilton and published in 1885, it is stated that 'in 1865 Dr. Lister began in *Edinburgh* his brilliant series of his triumphs in surgery.'"

THE DEATH OF MR. THOMAS HAWKSLEY.

THE death is announced at the age of eighty-six of Mr. Thomas Hawksley, F.R.S., one of the most prominent engineers of the present time. He was probably more intimate than any man with the branch of the engineering profession having to do with water- and gas-supplies; he could claim to have constructed 150 waterworks, many being of the largest character, and there were no important towns in Great Britain in which his advice had not been sought with regard to engineering and sanitary matters. The present system of constant service supply was the outcome of his suggestion, and, notwithstanding the considerable difficulties and opposition which he met with in his efforts to put the system into practice, he overcame all with his characteristic ingenuity and perseverance. He gave valuable evidence before the Royal Commission on Water-supply in 1868, and before the Royal Commission on the Purification of the River Thames in 1883; whilst he was examined as lately as 1892 before the recent Royal Commission on the Metropolitan Water-supply, the report of which is dealt with in our columns to-day. In June, 1878, Mr. Hawksley was elected a Fellow of the Royal Society. His life was a long record of useful service in the great problems of sanitary science—problems which he attacked solely in the interests and welfare of his fellow-men.

CEREBRINE IN CHOREA.

IN the *Lyon Médical* a case is reported by M. Montagnon in which cerebrine was used. The patient was a boy aged eleven who was admitted on account of chorea and rheumatism. With the exception of a neurotic history on the side of the mother, who committed suicide, there was nothing significant in the family history. Towards the end of April the child experienced pains in the left leg and swelling in the knee and ankle. The right leg and the upper limbs were subsequently affected and the pains persisted for a fortnight. About two weeks before admission at the end of May it was noticed that there was a tendency to irregular movements of the limbs. These commenced in the left arm and gradually spread all over the body, affecting also the head and neck. For three days the articulation had been disturbed. The case was apparently a typical one of rather severe chorea. The patient was unable to walk; there was no sensory disturbance, but there was a systolic as well as a presystolic murmur. On May 29th an injection of 1 c.c. of cerebrine was given hypodermically. On May 31st and June 5th these injections were repeated, and after the latter date were administered daily. On June 9th the movements were less marked and the child was able to feed itself. From the 13th two injections a day were given until the 23rd,

when the daily administration was resumed, and they were entirely discontinued on July 2nd. There had been gradual improvement, and on the 3rd the condition of the patient is described as excellent, the gait was good, there was no difficulty in speaking and there were no movements. The cardiac murmurs had almost gone, the presystolic murmur being no longer audible. M. Montagnon is to be congratulated on the fairly rapid recovery of his patient. Whether the cerebrine was a very active agent or not it is difficult to say. In a disease like chorea, in which the tendency is to improvement under favourable conditions and irrespective of drugs, it is impossible to draw any conclusions from a single case, however favourable, and we do not in this one see any reason for modifying the views as to cerebrine which we have already expressed.

THE REGISTRATION OF STILLBORN CHILDREN.

ACCORDING to a Parliamentary return issued in July, 1891, the number of children in England and Wales supposed to have been stillborn during 1890 was 17,335, and of these 4569 were interred without any medical certificate of the cause of stillbirth. It has further been shown by the evidence obtained at coroners' inquests that many infants termed stillborn have really been born alive but have died shortly afterwards, sometimes from natural causes but also by illegal means. Other returns go to prove what might have been accepted as a foregone conclusion, that the proportion of legitimate to illegitimate children believed to have been born without signs of life is about 2 to 4. These are suggestive data and they bring out in relief a comparison between our own and most other European countries in the matter of registration. Dr. R. Rentoul, writing in the *Child's Guardian*, has proposed that our national procedure in regard to this subject should be harmonised with that of other civilised communities by the enactment of a Bill requiring the registration of stillborn infants. We feel sure that the mere recital of the facts above stated is enough to justify the addition of such a measure to the national statute-book. As at present in regard to adult deaths, medical practitioners would certify in most cases, and the cost of the measure to the country would be trifling.

"ERYTHROMELALGIA."

SEVERAL years ago a condition of the feet was described under this name by Dr. Weir Mitchell. The characteristics broadly were that the part looked normal as long as the foot was kept in a horizontal position, but as soon as it was allowed to hang down it became rose red, the arteries throbbed and later the colour changed to a dusky red or violet tint; pain was always present, but was aggravated when the part was dependent or pressed upon, and was greater in hot than in cold weather; sensibility was preserved, but there was hyperalgesia. The temperature of the part was greatly above normal; this was in some instances increased by the dependent position, and in others lessened. The affection was asymmetrical, and no gangrene or tendency to it was present, thus sufficiently distinguishing the malady from the condition known as Raynaud's disease. In a recent lecture in the *Philadelphia Medical News* Dr. Weir Mitchell describes a typical case of this affection as occurring in a stonecutter twenty-one years of age, in whom it appeared after an accident to the foot which was subsequently affected. The local condition was as follows. The whole of the right foot as he lies at rest is supine, the leg extended being slightly redder in places than its fellow, but after remaining a few minutes in this position the hue of the feet is indistinguishable. When the foot becomes dependent it flushes at once, the upper limit of redness being marked by a dark red band across the ankle 1½ in. above the lower border of the internal malleolus. During the flush at first the veins are increased in size, and the arterial pulsation is visibly augmented in force. Later the arterial throb lessens and the colour becomes more purple, but all these phenomena disappear as soon as the horizontal position is reassumed. The aching in the foot is, however, constant. In this particular case the outer side of the foot was unaffected. There was rhythmical tremor present, involving the whole leg, the knee-jerk was increased, and there was ankle-clonus. Ordinary treatment was quite unsuccessful, and, at Dr. Weir Mitchell's request, Professor Keen excised portions of the internal saphenous and musculo-cutaneous nerves, at the same time stretching the two plantar trunks. This was advised with the view of lessening the reflex influences which caused the vascular congestion and of diminishing the sensibility so much as to permit massage. The operation was successful, and in a few weeks the patient was reported as being well and walking without crutches. In discussing the pathology of the condition, Dr. Weir Mitchell refers to the differences in various conditions now grouped as neuritis, and he is inclined to believe that the condition present in a case like that just described is possibly a so-called "terminal" neuritis, which sets up remote reflex effects. The excised nerves appeared to be absolutely normal, so that a trunk neuritis may be practically excluded. Spinal symptoms are undoubtedly present in some cases of the disease, but these are only the older ones, and the spinal symptoms present in the case under discussion—viz., the exaggerated knee-jerk and ankle-clonus—may really have been a result of reflex irritation. Whether that be so or not, however, Dr. Weir Mitchell's latest contribution to the clinical history and therapeutics of this obscure but interesting malady is full of that strong clinical common sense and rich suggestiveness which may truly be said to be characteristic of all his work.

THE POLICLINICO AT ROME.

IT is not within our province, and certainly it is not our practice, to intervene in political discussion; but occasions arise when medical interests are so vitally affected by Governments that we cannot altogether observe the silence we usually impose on ourselves. One of these occasions is the suspension—partial, we hope, and only temporary—of the building works in connexion with the Roman Policlinico, that noble edifice of Dr. Guido Baccelli, which is designed to inaugurate the "Instauratio Magna" of Italian medicine which he has cherished throughout life and which is appropriately, therefore, proposed as the seat of the next International Medical Congress, at which, for the first time in her history, the Eternal City will act as hostess to the professional world. Some weeks ago we noticed a decree of the Italian Government that, amongst all the public works of the Peninsula, the completion of the Policlinico should be carried out "di urgenza"—as a matter, that is to say, of urgent State concern. Since then we read of more than one partial interruption to the work in question, masons to the number of several hundreds having been "licenziati" (dismissed) and the other operatives employed only half-time, if at all. The financial difficulties of the kingdom are adduced as sufficient reasons for this most regrettable "solution of continuity"; and certainly, with Italian Rentes at 82 and the Exchange at 14 per cent., the difficulty of maintaining public works on an extended scale can be understood. To the same cause is ascribed the suspension for the next ten years of the new railway constructions, as well as of the architectural rehabilitation of Rome and Naples; indeed, it is hardly possible to name an Imperial interest throughout the Peninsula which is not injuriously affected, except one—the war budget. Thirty million francs have been cut down from the estimates voted for these undertakings; but, a leading journal of the Peninsula adds, "nè una corazzata, nè

un cannone, nè un soldato, nè un fucile di mens. Morire di fame, se occorre, ma armati" (not an ironclad, not a cannon, not a soldier, not a rifle the fewer. We are to die of hunger, if necessary, but armed to the teeth). This is surely an unhealthy condition of the body politic. That the destructive arts should be overfed and those of national development and reparation starved are sure signs that the vessel of the tate is not advancing with a fair wind to the haven of prosperity, but that it is rather drifting towards the inner circles of the maelstrom. Little more than six months now divide us from the meeting of the International Congress, and that interval is all too short to place the Policlinico in such order as to accommodate the 9000 "Congressisti" who are expected, and also to provide the necessary room for the nineteen Sections over which their work is distributed. To what shifts the executive committee will be reduced when so much of the medical world is on its hands—at a season, moreover, when the capacity of Rome is strained almost to snapping point—we shrink from contemplating, but when to this source of confusion is added the non-completion of the building in which the Congress is to transact its daily business the probabilities of a *fiasco* become only too alarming. As we write we are informed that 350 masons, thanks to the intervention of Signor Genala, Minister of Public Works, will—"tra quindici o venti giorni" (in a fortnight or three weeks)—be re-employed for the completion of the "clinica chirurgica," a stage of the building operations that was to have been *un fait accompli* on the last of the present month. But the leeway to be made up with the rest of the undertaking is still enormous, and nothing but the extremely improbable contingency of no further difficulty—pecuniary or other—intruding itself can warrant the expectation that the Policlinico will be in a fit state for the first great use it will be made to serve. No man in Rome, whether as municipal councillor or as member of Parliament, has laid the city under heavier obligations than Dr. Guido Baccelli, and to outsiders like ourselves it seems to be a poor return for such exertions on her behalf that so little is done to help him at a crisis when her reputation as a school and as a capital of world-wide fame has been committed to him. Italy's military and naval requirements may be urgent, but something, we think, might be spared from her "bloated armaments" (to use Lord Beaconsfield's phrase) in order to keep faith with the profession that in the past has done her so much credit and whose power of doing her yet more in the future depends on a little opportune and certainly not very exacting support.

TREATMENT OF MALARIA WITH METHYLENE BLUE.

SEVERAL articles have recently appeared in various medical journals on the treatment of malaria by administration of methylene blue, and the treatment seems to have met with considerable success. Cases of malarial fever in children often prove to be very rebellious to treatment; Dr. Ferreira of Rio Janeiro has tried methylene blue in such cases and his results are published in the *Revue de Thérapeutique Médico-Chirurgicale*. He treated forty children who were suffering from malaria with this drug and came to the following conclusions: 1. Methylene blue is a satisfactory drug for the treatment of malarial disturbances in children, especially when the cases have resisted other methods of treatment. 2. It is of use both in the intermittent and remittent varieties when the cases are not very severe, but when danger to life is threatened by the intensity of the poison—that is, in cases usually described as "pernicious"—the drug should be supplemented by hypodermic injections of bi-hydrochlorate of quinine, which acts more promptly and energetically than the sulphate of quinine. 3. Children take methylene blue without discomfort, neither vomiting nor diarrhœa occurring As quinine often produces these symptoms together with headache, the former drug is to be preferred. 4. The enlargement of the liver and spleen rapidly lessens and the methylene blue seems to exercise a distinct action on the micro-organism of malaria and its products. 5. After the administration of the drug the temperature falls, but not to such a marked degree as with antipyrine. 6. It may be safely administered to very young children and should be continued for some days after the disappearance of all manifestations of the malarial poison. 7. The drug should be more largely employed in malarial affections of children than is at present the case. It is best given, dissolved in some bitter, by the mouth.

THE DIFFUSION OF SMALL-POX.

THE small-pox returns during the past few weeks are by no means satisfactory when it is remembered that the period in question is that in which small-pox is generally at its lowest in this country. Last week a number of fresh occurrences took place, and, excluding isolated attacks, the cases were: London, 17; Walsall, 10; St. George's Bristol, 7; Birmingham, 7; West Ham, 7; Oldham, 3; Bristol, 2; and Tynemouth, 2. Taking the past three weeks together, Walsall has had 95 fresh attacks, Birmingham 41, and Leicester, with only one attack last week, has had 30 cases. The number of cases under treatment in the ships and convalescent hospitals of the Metropolitan Asylums Board varies from 80 to 85.

THE LATE SURGEON-MAJOR PARKE.

AT a meeting last week of the Provincial Grand Lodge of Freemasons of North Connaught a portrait of Surgeon-Major Parke was presented to the lodge, of which the deceased officer was a member, by Lieutenant-Colonel Folliott. He is represented as leaning upon his rifle in a costume similar to that worn by him in his African expedition; the likeness of the portrait, which was painted by Lieutenant-Colonel Folliott's daughter, is excellent. It has been decided to erect a Masonic Hall, to be called the Parke Memorial Hall, in Carrick-on-Shannon, and it is hoped that all admirers of the excellent qualities which characterised Surgeon-Major Parke, whether Masons or otherwise, will subscribe to this praiseworthy object with a view to perpetuate his memory.

UNILATERAL HYPERTROPHY OF THE FACE.

AN interesting case of unilateral hypertrophy of the face, and one of considerable rarity is related by Dr. Montgomery in the *Medical News* (New York) of July 15th. The patient was a man aged thirty-one whose family history discloses nothing of importance or significance. As regards his personal history, he had "brain fever" at two years of age and was apparently very ill. Otherwise his life has been uneventful and he has had no severe bruise or blow about the face. He never suffered from neuralgia. At the age of eight or nine he had an abscess over the inferior left maxilla which has left a deep sunken scar on his cheek. The first sign of the condition which is now present was noticed in an enlargement of the gums which occurred at ten years of age. The mother states that the facial deformity was distinctly visible two years later and has been gradually becoming more distinct. Now in the supra-orbital malar and mental regions, where the hypertrophy is most distinct, the tissues are raised up in large swollen masses and the bones can be felt to be deformed. The affection is markedly unilateral, especially on the nose and forehead, coming just up to the middle line. In the upper lip and gum there is slight encroachment on the other side. The skin on the affected side of the face is for the most part rough, coarse and thickened, the hair is abnormally coarse and the most marked bony enlargement is seen on the forehead. The scalp and the hair on the head are not altered, but the upper

part of the ear is enlarged. The teeth are very good and not abnormal, but the left upper alveolar process is immensely enlarged as is also the gum both internally and externally. There is no hypertrophy of the tongue and no derangement of ordinary or special sense. The patient himself states that he perspires more freely on the left side. A portion of the affected skin was removed and found to be very brittle and to consist largely of sebaceous glands. There were also masses of concentrically arranged epithelial cells which had undergone hyaline degeneration and formed visible tumour-like elevations of the skin of the cheek. The tissue around these was richly infiltrated with round cells. The case is curiously analogous to those in which the opposite condition—viz, hemiatrophy of the face—is observed. There is a similar absence of anything in the form of a sufficient cause and the condition is similarly limited. Whether it is the result of an irritation of the structures which have been found atrophied in Mendel's case of hemiatrophy—viz., the descending root of the fifth and the *substantia ferruginea*—it is, of course, impossible to say; but such an explanation is at least plausible.

AFTER THE HOLIDAYS.

THE holiday fever is passing off. Defervescence is setting in rather quickly and the temperature threatens to fall considerably below normal. This post-holiday stage of life seems to us to be entitled to a little more attention than it has received. It is often acute and disagreeable, so much so that the victim of it is apt to think that there is no other cure for it but "a hair of the dog that bit him"—another holiday, to be followed by the same depression, this in its turn necessitating further change, till a habit of restlessness in life is generated and people begin to feel never *at* home save when they are *from* home. This is a veritable evil that should be boldly met by resolute domestication and the cultivation of home employments and pleasures. A very little reflection will make this easy. There are innumerable advantages to be found at home and not elsewhere. Moreover, the everlasting sense of movement and noise which is associated with railway travelling, pleasure resorts and hotels is a very disturbing influence even to the most philosophical traveller, and the very mountains and rivers are apt to be used wrongly and injuriously by holiday-makers. We have no wish to encourage any morbid reflections. Those who have enjoyed their holidays must bear patiently with the mood which is apt to assert itself for a week or two subseqently. The reaction is in proportion to the pleasure—

> "So high as we have mounted in delight,
> In our dejection do we sink as low."

Nature, however, will restore the equilibrium, and the outcome of well-spent and well-enjoyed holidays should be to furnish us with fresh resolves to meet quietly the duties of life as they arise.

THE PERILS OF ANÆSTHETICS.

UNDER this title the *Times of India* has opened its correspondence columns to a discussion of the questions connected with the use of chloroform. A letter, we regret to say from a medical man, appears in the paper in spite of the obvious objections to the ventilation of purely medical questions in the lay press. The writer suggests "that the Hyderabad Commission has demonstrated that all the chloroformist can produce with chloroform is anæsthesia and that anæsthesia alone is entirely free from risk." He proceeds to say that the statistics which THE LANCET Chloroform Commission has adduced show, not that chloroform is dangerous, but that the "simple rules of the Hyderabad Commission" for producing anæsthesia by chloroform "are systematically and criminally neglected." Another correspondent, who ingenuously signs himself "Tyro," inquires whether the figures we publish of deaths under chloroform do not, when compared with the statistics furnished from Hyderabad, show that "THE LANCET Commission on Anæsthetics has something to learn from the Hyderabad Chloroform Commission." We need not comment on the lack of good taste displayed by a medical man writing in a lay paper that members of the medical profession who differ from the views of some of their brethren are "criminally" negligent, but we may point out what should have been obvious had the correspondents of the *Times of India* been better acquainted with the subject to which they venture to address themselves, that the work of the Hyderabad Chloroform Commission and that of THE LANCET Commission on Anæsthetics are entirely upon different lines, although THE LANCET Commission's work was undertaken as supplementary to the Hyderabad Commission's experimental researches.

STROPHANTHUS IN GRAVES' DISEASE.

DR. FERGUSON mentions in a recent number of the *American Medical Journal* that in 1890 he published a paper calling attention to the usefulness of strophanthus in cases of exophthalmic goitre. He returns to the subject in the paper under consideration, and emphasises the statement of the beneficial effect which it has produced in his experience in this affection. It is said to be particularly useful in the early cases in which rapid heart action may be almost the only symptom present, and, whilst not vaunting it as a specific in this disease, Dr. Ferguson is inclined to regard its usefulness as very great. In the discussion which followed the paper when it was read, various opinions were expressed on the subject of the treatment of Graves' disease, but the experience of the benefits of strophanthus did not seem to be universal. Without entering on a consideration of the subject of the paper we would express a certain amount of surprise that anyone writing on this particular drug should not be more familiar with the spelling of the name of Professor Fraser, to whom we owe its introduction.

MR. STANLEY'S TRIBUTE TO THE LATE SURGEON-MAJOR PARKE.

THE characteristic letter of Mr. Stanley on the death of Surgeon-Major Parke, which we published in last week's issue of THE LANCET, will remain in the literature of the profession as a historical tribute to one of its greatest heroes. Our profession is not poor in heroes; but it would be difficult amongst them all to find one greater, sweeter or gentler than Thomas Heazle Parke, of whom Lieutenant Stairs once said, "I consider he saved the life of every white man in the expedition and that he saved Mr. Stanley's life twice." Lieutenant Stairs himself no doubt spoke with more feeling as having personally realised the value of Parke's services on many occasions, and especially when his wound, caused by a poisoned arrow, was sucked by Parke; but it was with no such selfish limitation that he described the ardour of help and healing and resource exhibited by Parke, and which asserted itself under conditions of misery that have been rarely equalled in human experience. There can be no doubt that, next to Stanley, he was the life and the very saviour of the expedition. No difficulty in surgery, no extremity of disease, no loathsomeness in its victims deterred him, even when his own fever ran high and had to be kept in check with large doses of quinine of Warburg's tincture. And this is the man whom the State has allowed to die with a sense of neglect and ingratitude. It is too late now to make much amends. His memory will be cherished in the annals of human suffering and human endurance; but it will remain a mystery and a scanda of discredit to the service which he adorned and to th

nation which he served that they had no honours wherewith to reward him. England will not always treat her best sons so, and she will not always so easily forgive statesmen and other men of influence who are responsible for such neglect. Even now some repentance should be shown and some effort made to offer reparation to his family and his profession, and to perpetuate the memory of an Irishman who displayed the very highest human and medical qualities. Meantime we recall with delight the tributes which have been paid to him by his medical brethren, and we record with fresh emphasis and pride the eulogy of his leader, "the chronometer was not so faithful to Greenwich time as our doctor to his duties."

THE COUNTY SANITARY DISTRICT OF ESSEX.

THE return of cases of infectious disease which were notified during August in the several urban and rural sanitary districts of this county is a very complete one, and Dr. Thresh is to be congratulated on having procured such a large number of returns. We notice, however, one important omission—i.e., that of Southend urban sanitary district. The omission is probably due to some oversight, but it is to be regretted, inasmuch as during last year this district apparently suffered from an extensive prevalence of scarlet fever, diphtheria and typhoid fever. We notice in the table of notifications that a considerable number of cases had been imported from other districts—for instance, of ten cases of diphtheria notified in Chelmsford urban sanitary district three were apparently imported. Again, three cases of scarlet fever were notified at Clacton, but all were imported cases. It does not seem to be quite clear from the return whether the diseases were actually manifesting themselves at the time the patients arrived in the district, or whether the period which intervened between their arrival and the appearance of the symptoms was too short to render it probable that the diseases were contracted in the district in which they were notified. A footnote given to indicate the meaning of the word "imported" might be of use. We notice a heavy incidence of diphtheria in Barking urban sanitary district and of typhoid fever in Rochford rural sanitary district.

DIPHTHERITIC HEMIPLEGIA.

IN a recent number of the *Neurologisches Centralblatt* Dr. Donath of Budapest has published a case of diphtheritic hemiplegia. The patient was a boy eight years old, a peasant's son with healthy parents, who suffered from an attack of diphtheria which lasted fourteen days. On the third day of his convalescence, when he was beginning to get about, he was seized in the night-time with an attack of hemiplegia affecting the whole of the right side of the body, including the face, and also giving rise to loss of speech. During fourteen days this loss was complete; he could not, according to his mother's account, utter a word but made himself understood by gestures. He was able to understand all that was said to him. The paralysis so far as it affected the face began to pass off in three weeks and the aphasia to improve in four weeks. When he began to speak he could only do so in a whisper, but there was no difficulty in swallowing. Two months later, when Dr. Donath first saw him, there was no further improvement evident in speech, face or limbs. There was a well-marked weakness of the right side of the body affecting the face, arm and leg; the speech was strong, but rather stammering and indistinct. There was some contracture in the right arm and the corresponding leg was dragged in walking. There was slight general wasting of the affected limbs, but the electrical reactions were normal and there was no impairment of sensibility. The myotatic irritability in the affected limbs was much increased. Under observation there was slight improvement. In his comments on the case Dr. Donath directs attention to the rarity of hemiplegic diphtheritic paralysis, and in support of this quotes Dr. Gowers to the effect that "the weakness of the extremities in this disease is gradual in its onset, seldom or never absolute, and as a rule symmetrical, whilst distinct hemiplegic weakness is never observed." We venture to think that the case here recorded is no exception to this rule. Of course, it all depends on what constitutes diphtheritic paralysis, strictly so called. There is no doubt that Dr. Gowers has not stated that hemiplegia following diphtheria never occurs, and what he evidently means in the statement quoted is that diphtheritic paralysis, the paralysis produced by the action of the diphtheritic poison, or some product of it, on the nervous system, never affects one half of the body. The occurrence of a hemiplegia which is evidently the result of a cerebral lesion, whether thrombotic, embolic or hæmorrhagic, after diphtheria is evidently quite compatible with this statement, as it is a condition essentially different, and we think it is misleading that any such case should be described or regarded as an instance of post-diphtheritic paralysis.

SOCIAL RESIDENCE IN EDINBURGH UNIVERSITY.

MAN is naturally a social being, or, in the words of exact if not very deferential philosophy, a gregarious animal. Civilised man, under the influence of wealth, rank, common sympathies and numerous other factors, has tended to leave the general herd and aggregate in coteries by a process of natural selection. The extreme development of this separative faculty is the conclusion to which the Edinburgh student appears to have come—namely, that it is best for man to live alone. Those, however, who have his welfare at heart do not seem to share that opinion, of which an isolated existence is the outcome, but seem to think that the mode of residence is answerable for the opinion, not the opinion for the mode of residence. There has accordingly been a movement on foot for some years to establish the system of common residence, and we are informed that during the present year about forty students have taken advantage of the opportunities thus offered for living together in the different houses of "University-hall." The laudable objects of the promoters are said to be the fostering of the solidarity, sociability and *esprit de corps* of the Edinburgh students. We earnestly desire that they may have every success in their undertaking. Students thus resident appear to be a self-governing body and have no "lock and key" restrictions. The conditions of Scottish university life are not those which obtain at the wealthier universities in England, where the residential system has been so long established, but resemble rather those of Continental university life. The *esprit de corps* and sociability of the German student are too well known to be dwelt upon at greater length. These qualities are embodied in the various "corps" of the Fatherland, and admission to the latter is regulated by various social, personal and territorial considerations. The students are not in common residence. We cannot help thinking that useful lessons for the Scottish student are to be learned from a study of the methods of their German *confrères*. There are now altogether five houses in Edinburgh "University-hall," and in one of these the students are under wardenship.

APPLIED BACTERIOLOGY.

WE have from time to time drawn the attention of our readers to the importance of an early bacteriological examination of tuberculous sputa, diphtheritic membrane and choleraic and other dejecta in order that any evidence of specific infective disease may be obtained and preventive measures may be taken as soon as possible. This is fully appreciated abroad, where arrangements are made, especially in the larger cities, for placing at the disposal of the medical officers of health and others interested the services

of a skilled bacteriologist and chemist. The subject has also within the last year or two been advanced very persistently and forcibly in this country and the emphasis of the suggestion made by Dr. McIntyre of Glasgow comes very opportunely now that so much is being made of the bacteriological examination of cholera dejecta. The obstacle to be surmounted is now merely a financial one, as there are in this country numerous skilled bacteriological investigators, any of whom would be able to undertake the necessary examination could the unavoidable expenses connected with the organisation and carrying out of the work be defrayed. With the telegraph at our disposal and our rapid railway communication over a comparatively small area we are faced by none of the disadvantages which have to be met abroad, where the large tracts of country and the comparatively slow train service render imperative a much larger number of centres than would be necessary in this country. At present half-a-dozen centres would be sufficient for the requirements of the medical officers of health, though we cannot but be convinced that in time the advantages accruing from the examination of various morbid substances would make every populous city or centre anxious to have its own expert to assist the medical officer in the discharge of his exceedingly onerous duties. The saving to the communities directly would be enormous, even allowing that a moderately large sum were expended in making the service as complete and effective as possible, whilst the gain indirectly would be even greater. The early detection of disease ranks in importance only second to the prevention of disease, as it is, next to effective sanitation, the most important factor in checking the outbreak of epidemics.

PSYCHICAL DISTURBANCES IN DIABETES.

THE number of nervous complications which occur in connexion with diabetes mellitus is very great—e.g., paralysis of limbs, more or less complete; disturbances of speech, alterations in sensation, paralysis of the ocular muscles, neuralgic affections, epileptiform convulsions &c. None of these can be considered as pure accidents or coincidences occurring in the course of the primary disease, but must be taken as standing in a definite relationship with it. Dr. Jerzykowski[1] has published an article on psychical disturbances occurring in patients suffering from diabetes, of which he has observed several cases. In one patient, a man aged fifty, there was profound melancholia, with attempts to commit suicide, and in another, an old woman, there was also melancholia. In a third case, that of a widow aged sixty-one, there was also considerable mental disturbance. In none of these cases was there any hereditary tendency to insanity. As another instance of the relationship between diabetes and mental affections, Dr. Jerzykowski draws attention to the glycosuria which sometimes occurs after sudden mental shock. With regard to the question whether the psychical phenomena are primary or secondary to diabetes, he maintains that in the large majority of cases they are actual complications of the disease. He states that the most common of these phenomena are alterations in the intellectual powers, of the special senses and of memory. The cases noted above of melancholia are not so often met with.

THE STRUCTURAL CHANGES IN THE TESTICLE OF THE DOG WHEN IT IS REPLACED WITHIN THE ABDOMINAL CAVITY.

IN THE LANCET of July 29th we gave the *résumé* of a paper by Dr. Griffiths in the *Journal of Anatomy and Physiology* on the Structural Changes observed in the Testicles of Aged Persons. In the last number of the same journal there is a paper by Dr. Griffiths on The Effects observed in the Testicles of Dogs after they have been Replaced in the Abdominal Cavity, and the following are the chief conclusions which he draws from his experimental investigations and observations:—1. When the testicle of a young animal is replaced within the abdomen it undergoes but little change, growing somewhat, but not so much as the undisturbed organ, until the onset of puberty. 2. A testicle so replaced after the onset of puberty continues to grow to some extent, though but little; the seminal tubules are seen to be lined by a single layer of columnar epithelial cells lying upon the tunica propria, with delicate prolongations extending into and occupying the lumen of the tubules; the central cells, from which in the normal state spermatozoa are produced, do not exist, and spermatozoa, accordingly, are not forthcoming. 3. The testicle remains in this state; at least, we have no evidence that it undergoes further change. 4. The testicle of a full-grown animal, when replaced in the abdominal cavity, soon dwindles to two-thirds or one-half its natural size and after a short time presents precisely the same structure as that which is found in the replaced testicle of a young animal above noted. 5. The testicle, the descent of which has been arrested in the dog, either in the groin or in the abdominal cavity, shows the same histological characteristics as the organ which has been replaced by experiment. 6. Replacement of the testicle can, with ordinary care, be effected without injury to the organ and without setting up inflammation in its structure, the occurrence of which would be detrimental to an experiment.

THE ERUPTION OF DENGUE.

ON Aug. 8th Dr. De Brun of Beyrouth read a paper[1] before the Paris Academy of Medicine on the various forms of eruption to be met with in connexion with dengue. The rash may resemble that of scarlet fever, measles or rubeola. Occasionally it consists of fine papules closely crowded together, and it is followed by a dry desquamation, which is accompanied by a most troublesome sense of itching. The eruptive forms of dengue may be divided into three varieties. 1. The eruptive febrile form. This is distinguished from the other exanthemata by the following characteristics. In dengue the rash is not constant; it may appear at any stage of the disease. The appearance of the eruption does not seem to have any power of modifying the other symptoms of the malady, nor is the severity of the attack at all affected by the abundance, or the reverse, of the rash. 2. The eruptive apyretic form. This is more common than the above. It is characterised by the rash appearing over the whole body, or over certain parts; its abundance is in relation to the other symptoms of dengue (cephalalgia, prostration, aching pains &c.), but there is no rise of temperature. 3. The form in which the rash is the only manifestation of the disease, "the exclusively eruptive form." When the eruption simulates that of measles it may easily be mistaken for the rash which is occasionally to be seen in cases of influenza; but there are the following characteristics with the dengue eruption: (1) it does not assume any definite distribution over the body; (2) it does not necessarily appear first on the face, but just as frequently on the trunk or upper limbs; (3) it is never accompanied by nasal or bronchial catarrh; (4) the eruption rarely appears at the onset of the fever; and (5) it is nearly always followed by desquamation and itching.

FOREIGN UNIVERSITY INTELLIGENCE.

Cracow.—Dr. Gluzinski has been promoted to the Professorship of General and Experimental Pathology.

Strasburg.—Dr. Klemperer has been recognised as *privat-docent* in Medicine and Dr. Weintraub as *privat-docent* in Laryngology.

Tübingen.—A Clinic for Mental Diseases has just been

[1] Nowiny Lekarski, 1893, Heft 7; abstract in Allgemeine Wiener Medizinische Zeitung, No. 186, 1893.

[1] La Presse Médicale Belge, Aug. 13th, 1893.

established and Professor Siemerling of Berlin has been appointed to the Professorship.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Leopold Müller of Berlin, who was formerly employed by the Japanese Government to take a leading part in founding and carrying on the Medical School of Tokio.—Dr. Julius Knock, a Russian military surgeon whose name is known in connexion with researches on Trichinosis.—Dr. Hjalmar August Abelin, formerly Professor of Children's Diseases in the Caroline Institute, Stockholm.—Dr. Richard Schmitz, a well-known physician of Neuenahr.—Dr. Ritter, the senior medical man in Würtemberg, in his 90th year.

THE annual dinner of the past and present students of Charing-cross Hospital will take place at the Holborn Restaurant on Oct. 20th at 6 30 P.M., when Surgeon-Captain Leahy, F.R.C.S., will be in the chair. The opening address at Mason College, Birmingham, will be delivered by Professor Jebb, Litt. D., M.P., on Monday, Oct. 9th.—Professor Lionel Beale will deliver the introductory lecture to his forty-first course at King's College on Friday, Oct. 6th, at 4 P.M. The subject of the lecture will be on "Progress at King's and on Vitalism in Life."—Professor Paterson, M.D., will deliver the opening address at University College, Dundee, on Tuesday, October 10th.—The first meeting of the session of Guy's Hospital Physical Society will be held in the anatomical theatre of the hospital at 8 P.M. on Monday, Oct. 2nd. This will be preceded by a house dinner, at which Dr. Wilks, F.R.S., will preside.

SIR WILLIAM BROADBENT was on Saturday last the recipient of flattering attention from the inhabitants of Longwood, his native place. He was presented with an illuminated address of congratulation upon the baronetcy which Her Majesty has recently been pleased to confer upon him. Complimentary speeches were made with reference to his distinguished career as a physician by the Vicar of Longwood, Mr. Gerald Williams, and others. Sir William Broadbent subsequently entertained many of the inhabitants of the town to tea, the number of his guests amounting to about 500.

THE Essex County Council announce a course of instruction in practical sanitation, with special regard to the requirements of sanitary inspectors and persons undertaking duties under the Public Health Acts. There is no need to expatiate, particularly with cholera at our door, upon the wisdom of the council's action and upon the importance of sanitary officers possessing efficient instruction. The classes are free, and travelling allowances will be made to selected persons regularly attending the course. The secretary, Mr. J. H. Nicholas, 35, New Broad-street, E.C., will afford any further information.

THE Transvaal newspapers are just now largely occupied with reports of a serious outbreak of small-pox at Johannesburg. The sanitary committee has met for the purpose of devising means for coping with the epidemic. From the last reports to hand the disease would appear to be on the increase and to be exciting great alarm in the minds of the inhabitants of the locality. Dr. Cuffe states that every precaution is being taken to prevent the further extension of the epidemic.

THE new department of Human Anatomy in the University of Oxford is to be opened by the Vice-Chancellor on Saturday, Oct. 14th.

IT is understood that at the Church Congress which is to assemble at Worcester on Tuesday next the question of the preferable mode of disposal of the dead, whether by cremation or by earth-to-earth burial, will be brought forward. The subject will be treated by several prominent hygienists, amongst them being Dr. Bostock Hill, Dr. Vivian Poore, Mr. Seymour Haden and Sir Douglas Galton.

DR. NORMAN KERR will preside at a quarterly general meeting of the Society for the Study of Inebriety, which is to be held in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, on Tuesday, Oct. 3rd, at 4 P.M. A paper will be read by Dr. F. R. Lees, F.S.A.E., on some Illogical Assumptions and Statements, Ethical and Physiological, regarding Inebriety.

THE hundred-and-fiftieth anniversary of the foundation of the University of Erlangen was celebrated last month with much rejoicing. The prælector on the occasion was Dr. Adolph Strümpel, the American edition of whose excellent text-book upon medicine, translated by Dr. Shattuck of Harvard, was recently noticed in THE LANCET.

WE have received from a trustworthy source a contradiction of the rumour that Sir James Crichton Browne intends to resign his appointment of Lord Chancellor's Visitor in Lunacy and to offer himself to a Parliamentary constituency at the next general election.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

As we have already said a cholera epidemic, if we may judge from previous experience and especially from that recorded in India, appears to last about four years; it is not continuous, however, throughout each year, but has its months and seasons of dormancy and activity; its appearance, and still more the extent and persistence of its manifestations, being influenced to some extent by conditions of site and climatology. The season is at hand when we may confidently expect that the disease will decrease and that a sensible change for the better will be noticed in the cholera returns at home and abroad. Although the appearance of cholera may probably be accelerated or retarded by the presence or otherwise of certain conditions of climate, soil and surroundings, so that it may manifest itself at different times in different places, it nevertheless seems to be pretty constant as to the time of its manifestation at the same place, according to the observations of those who have made this a subject of study. When a locality is affected with cholera no one can go into it without incurring a certain degree of risk. There is a remarkable difference between a stationary and a moving population or body of men; the former are liable to attacks extending over a long period, but a moving body is not—it appears to carry the infection with it for the shortest time, and troops on the march commonly lose it within twelve days and often within four days, unless they occupy cholera-contaminated sites and become re-infected. A community may be attacked by cholera in a given locality, move out of it and lose the disease, return to the locality and acquire it again, to lose it by another move, even where those suffering from diarrhœa accompany them and deaths from cholera take place after the move. There does not seem to be any doubt that localities may become infected and that all the cholera cases may come from a very limited area in a town or village, or, in the case of a barrack, public institution or house, from a certain spot in it, and the obvious thing to be done under such circumstances

is, of course, to leave it at once. The measures that experience has proved to be efficacious in other epidemic diseases are, after all, the most efficacious against cholera also—change of site, elevation, a pure water-supply, efficient drainage, free space and ventilation, together with the avoidance of all depressing causes on the part of individuals. A few words on the influence of season and cold weather may not be out of place. Cholera entered Russia in May, 1892; indeed, it is alleged that the earliest case on Russian soil occurred on May 19th of that year. Notwithstanding that heat and moisture are fostering agents of cholera and cold a repressing one, the disease has as a matter of fact prevailed extensively in some countries in winter, especially in Russia, and it is quite possible that the extreme heat of the dwellings of the poorer classes in that country, the foulness of the air—unchanged by ventilation or influenced by light—the overcrowding and the polluted soil, may furnish an explanation of this persistent prevalence of cholera in a Russian population during winter. Cholera is notably a disease of the "masses" as opposed to the "classes," although the latter are not altogether exempt of course. The history of cholera in the Russian army in 1892 shows the same thing. Everywhere the disease prevailed amongst the rank and file and not amongst the officers of the Russian army, for the latter either escaped altogether or suffered comparatively insignificant losses. In every instance, too, the civil population were attacked first at the different stations.

The duration of the epidemic and the extent of its ravages have, no doubt, been most noticeable in a colossal country like Russia. Its geographical position and Asiatic territories brought it nearest to and exposed it to the initial force, as it were, of the epidemic invading from the East; its large rivers offered facilities for its spread, whilst the dirt and poverty of its population tended to foster its development. But when the history of the present epidemic comes to be recorded the Mohammedan pilgrimages to Mecca will occupy a very prominent part in it. Everything that could aid in the spread of cholera and tend to increase its virulence was present and the loss of life has consequently been enormous. These pilgrimages terminate at the end of this month and the Egyptian quarantine establishments at El Tor, Rasmallap and Nakhel will be closed. According to *The Times* correspondent, upwards of 44,000 pilgrims, Egyptian and others, have passed through Suez on their way to Mecca, of whom, including those still in quarantine, only 30,388 have returned; and these figures only apply to a small proportion of the entire army of pilgrims, which is estimated at 200,000 or 250,000, and comprises contingents from Persia, India and farther east, and those who come by overland caravans. The strain on the Egyptian authorities has been great, and the experience gained in working the quarantine regulations shows the impossibility of executing anything like a perfect system when applied to such large masses. Something will have to be done to regulate and provide for these pilgrimages to Mecca, for as they are at present carried on they are a disgrace to humanity as well as a source of international danger.

According to the returns from St. Petersburg there were 166 cases of cholera and 78 deaths in that city between the 18th and 20th inst., and from the 16th to the 18th there were 13 cases and 10 deaths at Moscow. At Cronstadt from the 15th to the 20th there were 20 cases and 8 deaths, and at Sebastopol 3 cases and 3 deaths from the 15th to the 19th inst.

The latest intelligence (Sept. 27th) from St. Petersburg shows that 60 cases of cholera and 23 deaths occurred in that city on the 26th inst. The epidemic in the provinces manifests a sensible diminution. The returns show that in St. Petersburg during the week ending Sept. 26th there were 263 cases and 118 deaths, as compared with 372 cases and 159 deaths during the preceding week. At Moscow, from the 19th to the 24th inst., there were 12 cases and 9 deaths; at Cronstadt, from the 21st to the 24th, 14 cases and 6 deaths; at Warsaw, from the 10th to the 16th, one case and one death. During the week ending the 16th inst. there were 390 cases and 140 deaths in Volhynia; 414 cases and 175 deaths in Ekaterinoslav; 10 cases and 5 deaths in Kalish; 548 cases and 223 deaths in Kieff; 248 cases and 117 deaths in Kursk; 229 cases and 76 deaths in Mohileff; 15 cases and 11 deaths in Radom; 115 cases and 50 deaths in Samara; 7 cases and 5 deaths in Smolensk; and 177 cases and 55 deaths in Tchernigoff. In the government of Minsk there were 83 cases and 31 deaths from the 17th to the 23rd; in Podolia, 1704 cases and 652 deaths from the 2nd to the 16th; in Siedlec, 8 cases and 4 deaths from the 13th to the 19th; and in Lublin one case and one death on the 19th and 20th respectively.

According to the statistical bulletin, published by the Chief Sanitary Board at Vienna, 649 persons had been attacked, and 400 had died of cholera in Galicia from the outbreak of the disease up to the 19th inst. During the 20th and 21st inst., 9 cases and 5 deaths occurred in Galicia, and 14 cases and 8 deaths in Hungary. The latest reports show a slight increase of cholera at Budapest.

It will be seen that the percentage of deaths to attacks during this epidemic had been high. It may be here remarked that cholera seems to have grown more fatal of late years both in India and elsewhere. The late Dr. Bryden's reports had a table showing the results for a series of years. In 1818-21 26 per cent. of those attacked died; in the sixteen years ending 1854 41 per cent. died, and since that time the ratio has been over 50 per cent., and even higher in some epidemics and outbreaks in India. At first sight this would appear to be attributable to differences in the diagnosis. All the cases of diarrhœa and the mildest form of the disease were presumably at one time included together and designated "Asiatic cholera," whereas of late years, and especially since the orders of the Indian Government entailed the moving of the troops into cholera camps on the occurrence of two or three cases in barracks or cantonments, only the worst type and such cases of the disease as were unmistakable have been returned as cholera. But this reasonable explanation does not seem to be an altogether adequate one, for the figures in the table are consistent with one another; the rise in mortality is a gradual and progressive, and not a sudden, one. Be this as it may, it is certain that the intensity of the disease in those attacked has not diminished, and the methods of treatment employed in more recent times have not made any real impression on the ratio of mortality.

We learn from Berlin that sporadic cases of cholera continue to make their appearance. As regards Hamburg, from 5 to 10 fresh cases occur daily, but the disease appears to be decreasing on the whole, and it is certainly diminishing in severity as compared with the epidemic of last year, for it is not nearly so fatal to those attacked. It is not at all uncommon for cholera to be renewed to a certain extent in areas and districts that have been previously occupied by an epidemic, but the number of cases taken in the aggregate do not attain the proportions previously assumed—the area that has been covered by a severe epidemic in one year is hardly ever affected by another severe outbreak or epidemic the next year. It will be remembered that there was an outbreak of cholera at Altona during last winter. The last case of cholera at that place was observed on Feb. 20th of this year, and, nothing having happened since, it was stated on high authority that the Altona epidemic was utterly extinct. But that is not the way in which cholera usually comports itself in India, where sporadic cases commonly reappear in districts that have been visited by a cholera epidemic, and we are consequently not surprised to find such cases reappearing in Altona this year on the recurrence of favouring conditions.

From Constantinople we learn that the outbreak in the Lunatic Asylum has declined and practically ceased. Some cases have occurred, however, in the military hospital near Scutari, 5 of which have proved fatal, and 1 fatal case is stated to have taken place at Pera.

The public health of Greece continues to be satisfactory. The popular idea that would make heat and cholera almost conterminous expressions and link them together as cause and effect like heat and sunstroke does not find much support as far as Greece is concerned, for we learn that almost tropical heat has prevailed there and that the health in all parts of Greece has notwithstanding been excellent.

We learn from Madrid that there is a slight improvement at Bilbao, where, by the last accounts, the disease still prevails, and there were 7 cases and 6 deaths in 24 hours and 22 cases and 11 deaths in the rest of the Province of Biscay. Since the 1st inst. there have been 25 certified deaths from cholera and 43 cases of choleraic disease in Bilbao. By the latest accounts no fresh cases had occurred in Aragon.

As regards the Netherlands the reports from the Hague show that cholera still prevails, though to a very slight extent, at Rotterdam and Amsterdam, at Gameren, Zwijndrecht, Odenbosch, Rosenburg, Hagestein, Alphen-on Rhine, Ysselmonde and other places.

At Antwerp there have been no fresh cases for the last few days. The total number of cases recorded since the beginning of the outbreak is 78, of which 51 were fatal—a heavy mortality.

Cholera still prevails to some extent in certain parts of Italy—at Palermo and Leghorn, at which places, according to telegrams from Rome, there were recently 16 fresh cases and 13 deaths and 26 cases and 4 deaths respectively in twenty-four hours. The total number of cases that have occurred at Palermo since the outbreak is 245, of which 134 proved fatal. The disease has also appeared in the Sicilian province of Messina.

As regards France we learn from Paris that the total number of deaths at Brest and in its vicinity during the week was 126. There were 5 deaths from cholera at Brest on the 23rd inst. and 3 deaths on the 26th inst.

CHOLERA AT ROTTERDAM.

(FROM OUR SPECIAL CORRESPONDENT.)

The Water-supply.—Bacteriological Analysis.—The Effect of filtering Water on the Prevalence of Typhoid Fever.—Draining into Canals.—Sanitary Regulations.—The New Hook of Holland Route.

THOUGH there have been a few cases of cholera at Rotterdam there is less cause for apprehension in this town than at Antwerp. Of these two great ports the former has the better water-supply and the better system of drainage. The water-supply, it is true, is derived from a very bad source, but the system of filtration seems to work satisfactorily; besides which there are no wells at Rotterdam. The town water, such as it is, can be procured everywhere, and there is a supply equal to 210 litres per head daily. The charge for a family in a small cottage is 3 fl. (5*s.*) per annum. For better class property the water tax is estimated according to the surface measurement of the apartments which are supplied, the charge being about 4*d.* per square metre yearly; thus a house occupying ten metres by ten metres of ground (100 square metres) would pay £1 13*s.* 4*d.* per annum for its water-supply. This is a curious method of estimating the water tax, but perhaps it is based on the fact that the Dutch are very particular with regard to the washing of floors, walls and pavements. The water is taken from the Maas before the river reaches Rotterdam. It is drawn from the river three hours after the tide has been flowing outwards towards the sea—that is, at the moment when the water is least likely to be foul. The water is allowed to settle in a large reservoir of a capacity of 70,000 cubic metres. Here, whilst it is exposed to the purifying action of the sun and the air, it deposits substances which have been previously held in suspension. The clarified water is then carried to the filtering beds, and when it is filtered it is delivered, under pressure and through iron mains, to all parts of the town.

It is dangerous to drink the water of the Maas when it is unfiltered. Formerly it was drunk without being filtered; and before the waterworks were established the majority of visitors to the town suffered from severe attacks of diarrhœa. This was so general that the complaint was named the "Rotterdamer" and all new residents in Rotterdam had to go through a period of probation till they became inured to it. It is not surprising that this water should have been held in such evil repute, for on analysis the unfiltered water of the Maas has been found to contain 129,000 bacteria per cubic centimetre. That the process of filtering is effective in remedying this state of things is proved—firstly, by the reduction of the death-rate; and, secondly, by the reduction in the number of bacteria which the water contains. The water is very frequently and very carefully analysed—in fact, it is analysed nearly every day. I have seen the results of several of these analyses, and the number of bacteria was frequently below 100 per cubic centimetre. The number of from 300 to 500 bacteria per cubic centimetre was, however, the usual proportion, and sometimes it considerably exceeded those figures and ranged from 1000 to 2000. On one occasion it actually exceeded 3000, but that was quite exceptional; it was due to some alterations which had been made that day and which interfered with the proper working of the filtering beds. Thus it may be said that the quality of the water-supply is, on the average, fairly good. In any case and however the quality of the filtered water may be criticised, there is the fact that the death-rates from typhoid fever during the five years previous to the opening of the waterworks were 52·8, 20 6, 30 9, 59·09 and 28 6 per 100,000 inhabitants respectively. After 1873, when the waterworks were completed, the death-rates from typhoid fever have been 10 3, 6 2, 6 8, 5 7, 11·2 12·9, 8·0, 9 2 and 8·2 per 100,000 inhabitants. The comparatively low death-rate from typhoid fever has been maintained and the general death-rate is also greatly reduced. It is now about 22 per 1000, whereas formerly it often exceeded 30 per 1000, and in years of epidemic it was higher than 40 per 1000. In 1849 the death-rate was 46 10 per 1000; in 1853 it was 43·07 per 1000; in 1863 it was 32·45 per 1000; in 1873 it was 31 97 per 1000; and in 1883 it was 24·02 per 1000. Of late years the death-rate has been as follows: in 1890, 22·19 per 1000; in 1891, 20·37 per 1000; and in 1892, 22 42 per 1000.

These figures suffice to show that a considerable improvement has been effected, and the progress is due in a great measure to the waterworks and to the drainage works. It was in 1860 that the sewers were built and that cesspools and the draining directly into most of the canals were abolished; but the old system of draining into the canals is still maintained for those houses that are built between the river embankment and the river dyke. The dyke is some considerable distance inland from the river, but all the canals on the river side of the dyke are swept by the river current and by the tide. It has been calculated that no less than 70,000,000 cubic metres of water pass through these canals in the course of one day. Consequently, in the walls of the houses that abut on these canals numerous drains may be seen, most of them being above the level of the water; rain and slops run out of them and trickle down the side of the house wall into the water of the canal. There is a rule, however, that watercloset drain-pipes must discharge their contents below the surface of the canals. The part of Rotterdam that is beyond the dyke has been divided into three watersheds. A great portion of this district is below the level of the river and would be flooded but for the dyke. Each of the three districts has its main or collecting sewer and its pumping station to raise the sewage. There is the western district, which is formed by a loop of the river, the principal sewer outfall being in this district. Near the pumping machine there are large reservoirs, where the sewage can accumulate till such time as the condition of the tide is favourable for raising it and for pumping it into the Maas. At that time the Schiedameveste canal can be utilised to flush the sewers. Though this canal is 3·50 metres below the level of the river it is above that of the sewage reservoirs or tanks. Thus the canals are employed and provide an unlimited amount of water for flushing the sewers. The Goudschevest canal and two other canals are utilised in a similar manner to flush the main sewers of the eastern and northern districts. The main sewers measure 80 centimetres by 1 metre 20 centimetres, and they are egg-

shaped. The smaller sewers are 40 centimetres by 60 centimetres. The law requires not only that every house shall be provided with a closet, but that every separate tenement or lodging must have a closet of its own. Every soil-pipe must be trapped and must be continued up to and above the roof of the house for the purposes of ventilation. If these rules are not observed the police have orders to prevent anyone living in the house. A charge of 2*s.* 4*d.* per annum is made for the supply of unlimited water for each water-closet; thus it will be seen that, excepting the portion of the town which drains directly into the canal, Rotterdam is drained in the usual English manner. The difficulty which is due to the fact that a large portion of the town is below the level of the river is overcome by the employment of very powerful pumping engines. There are three such engines; one of them working half its power suffices to raise the sewage, the remaining power and engines being reserved to deal with heavy rainfalls. As the Maas flows towards the sea for eight hours and the back current, due to the rising tide, only lasts for four hours, it is considered that the sewage when thrown into the river is successfully carried away; and this is also the case with regard to the canals that receive the sewage directly from the houses. I have noticed a considerable amount of refuse floating on the surface of the water of these canals, consisting of leaves, vegetables, corks &c., but the water seemed to be fairly clean and it was not stagnant.

The police act as sanitary inspectors with regard to sanitary supervision and they are trained to disinfect houses and rooms. They place bedding, clothes &c. in large air-tight bags and take them to the disinfecting stations, where they are purified by steam under pressure. There are two disinfecting stations situated at the extreme ends of the town. The rooms are afterwards sprayed all over with a mercurial solution. As yet there has been no second case of cholera in a house that has been disinfected by the police. Great rigour is also exercised with regard to disinfection after cases of scarlet fever. Finally, I should mention that on every canal bridge throughout Rotterdam a notice is placarded stating that boiled water will be gratuitously supplied to all bargemen; nevertheless, the inhabitants of the barges still occasionally drink the canal water and this is considered the most frequent cause of the cases of cholera that have occurred.

Taking the above facts into consideration, I must conclude that if cholera can be warded off by good sanitation Rotterdam is a safer town than Antwerp. This is a fortunate circumstance, at least so far as the growing passenger traffic is concerned. At the present time a great number of passengers travel backwards and forwards to England by the Rotterdam and Hook of Holland routes. The latter is a new route and has only been opened this season. Instead of spending an hour and a half in steaming up the river to Rotterdam most of the passengers now land at the Hook of Holland, which is at the mouth of the Maas, and they arrive at Rotterdam by train in twenty-five minutes. To reach Berlin and other places in the north of Europe this route affords very great facilities in convenience and in the saving of time and expense, and it is likely to become more and more popular; consequently it is a very great advantage for the increasing number of persons who travel this way that such notable improvements should have been effected in the sanitation of the town of Rotterdam. On the steamers themselves the very greatest care has been shown with regard to the sanitation of the ships. On board the newer vessels the cabins are ventilated not merely by cowls and the ordinary apertures, but by means of powerful fan ventilators, which are worked by engines and draw out the vitiated air. The newer ships can effect the crossing in seven hours and are as comfortable as transatlantic steamers. The sanitary condition of Rotterdam is of interest to a great number of English travellers; it is therefore a matter of satisfaction, when describing this port, to be able to give, on the whole, a favourable account of its water-supply, drainage and sanitary administration.

LATEST CHOLERA INTELLIGENCE.

WE are informed at the time of going to press that at Hull 1 new case of cholera had occurred and that there were 3 cases under treatment. In Grimsby 6 cases were reported as being under treatment, and the return from Cleethorpes on the 26th inst. indicated that there were no fresh cases and no deaths, although 5 cases were notified as being under treatment. Between Sept. 23rd and 28th Grimsby did not return a single new case, whilst the medical officer of health was recording daily from 6 to 10 patients as being under treatment. At Cleethorpes the same thing appears to have occurred. It will be noticed from Dr. Tatham's letter, which we publish in another column, that since Monday, the 18th inst., not a single case has occurred in Manchester. On the 26th inst. a suspicious attack was reported as having occurred in Waterloo-bridge-road. The case has ended fatally and the medical officer of the London County Council states that, bacteriologically considered, the case would appear to be one of true cholera. At Rowley Regis in Staffordshire an officer of the Local Government Board has been making inquiries into some suspected cases which have occurred in the district of Tividale. No deaths beyond the two already reported have occurred and there have been no further attacks since early in the morning of the 25th inst. The source of infection has not yet been traced and it has been determined by the local sanitary authority to require notification of cases of diarrhœa.

THE CHOLERA EPIDEMIC IN GERMANY DURING THE WINTER OF 1892-93.

I.

WE have received from our correspondent at Berlin the following translation of a *brochure* by Professor C. Koch on the cholera in Germany during the winter of 1892–93, which has recently appeared:—

The first epidemic in Hamburg began on Aug. 16th, 1892, and may be said to have ended on Oct. 23rd; during this period the number of cases reached 18,000, with 8200 deaths. The second epidemic may be reckoned as lasting from Dec. 6th, 1892, to March 4th, 1893; in this outbreak there were 64 cases and 18 deaths. Each epidemic lasted about two months, but the difference in severity was enormous. It might be thought that the seasons had something to do with this difference and that the high temperature of summer favoured the spread of the disease, whilst the cold of winter limited its extension. This explanation is, however, not tenable, for in the same winter and at its coldest period occurred the outbreak at Nietleben which in proportion to population was much more fatal than the summer epidemic in Hamburg. The possibility that Hamburg after the first epidemic attained a kind of immunity and offered only a limited amount of susceptible material for a second outbreak does not seem likely in face of the fact that on previous occasions the city had suffered from severe epidemics following one another in less than a year. It must also be remembered that the population of Hamburg fluctuates greatly and that at the commencement of the first epidemic a large number of people left the city who, on their return in October, would on this theory have presented a large mass of material for a further extension. I have previously called attention to the two entirely different types of outbreak in which cholera occurs. The one is explosive and its chart presents a very steep ascending curve with an almost equally abrupt descent. The other shows a curve but little raised above the base-line of the chart. The recent epidemics in Hamburg are respectively extreme representations of these two types. The summer epidemic appears as a very high-pointed triangle with narrow base, the curve of the winter epidemic rises but little above the base-line of the chart. The first type occurs when the infectious material is suddenly and equally distributed over the entire locality. The distribution will, of course, seldom be absolutely equal, for differences of habit, cleanliness, nutrition, closeness of population &c. exercise undoubted influence; still, in order to produce this type of epidemic there must be a more or less sudden and equal distribution of the infectious material and little or no immediate connexion between individual cases. This can only

happen by means of something which can affect the whole population at once—as air, water, soil, food. Neither air nor soil nor food has ever yet been shown to have caused one of the explosive epidemics of cholera. Insects also cannot come in question, since cholera explosions are not uncommon in winter, when the conveyance of the poison by insects is impossible. Small groups of cases may indeed be caused by infected food, and insects may play a part in thus conveying infection, but the sudden poisoning of a whole locality cannot arise in this way. There remains only water; and that in fact cholera germs are conveyed by water not only to small groups of the population but to whole towns and even large cities has been shown in previous epidemics and was again demonstrated with especial clearness in the recent epidemics in Hamburg, Altona and Nietleben. To the assertion that water acts as a conveyer of infection it has been objected that the distribution of the cases in such epidemics was too irregular; the infected water reaches all houses, and yet there are houses and whole streets in the district supplied by such water where little or no cholera appears. Properly speaking, if the water was the cause, then of the people who came into contact with it a certain percentage would always be attacked. This hypothesis would be correct if the cholera poison was soluble in water, if everybody took the same quantity of it and if the susceptibility of all was equal. But we know definitely that not one of these conditions is fulfilled. Bacteriologists have always insisted on the great difference in susceptibility which different individuals present. Further, individuals differ greatly in regard to the consumption of water. One person drinks none at all and is accordingly in much less danger of infection than another who drinks water regularly; in the latter case the quantity drunk has to be considered and whether taken on an empty or full stomach, and so on. The most recent researches show that the cholera bacillus only occurs exceptionally in large numbers in water, and it is therefore not necessary that every drop or every mouthful of infected water should contain bacilli. It is also very questionable whether they are equally distributed in the water and, if so, whether they remain so. One can readily suppose that, like other bacteria, they adhere to fixed objects—for instance, the inner surface of water-pipes—especially if the flow of water be usually or temporarily slow. Here they may either die or, if circumstances are favourable, multiply; they may also be washed loose by an unusually strong stream. The unequal movement of water in the supply pipes must have an important influence on the transmission of the cholera bacilli, so that one set of pipes may have many bacilli washed into it, and another set few. Should it happen in the latter case that the houses are inhabited by well-to-do persons—who, in consequence of their mode of life, are much less liable to attack—then it might easily happen that rows of houses, even whole streets, remain unaffected by the disease without justifying the denial of the infection of the water-supply. This same question has been discussed during previous cholera epidemics and it is not superfluous to call to mind what Farr in striking terms said in reply to those who denied that the outbreak of cholera in 1866 in the district supplied by the East London waterworks was due to infection of the water-supply. At that time it was not possible to prove by bacteriological examination that the water was insufficiently filtered, but there was another circumstance which showed that it must have been defective. There appeared in the water-supply of a number of houses a quantity of small eels, an unequivocal proof that the water pipes contained unfiltered water. Farr concluded that by the same road the cholera poison from the river Lea, which was much fouled with sewage, found its way into the water pipes of the houses where cholera appeared. It was argued in reply that in many houses supplied with East London water no cholera had occurred and hence the water could not be the means of spreading the disease. Farr answered as follows: "Eels, as we have seen, were found in the water of a certain number of houses in East London. To argue that in hundreds of other houses no eels were found and that therefore the company never distributed eels in the district would be absurd. The fallacy of such reasoning is obvious. It assumes the form that if no eels are found in the water of a certain number of houses none exist in the water of any houses. As the eels are limited in number they cannot be distributed universally and the fact that they were discovered in one house and not in another would depend on laws and circumstances so intricate as to make the ascertained distribution anomalous, but not necessarily more anomalous than the distribution of the lower forms of organised matter to which the phenomena of cholera in man are due."

The second type of cholera epidemic is distinguished from the first not only by the form of the chart curve but also by other peculiarities. The distribution of the cases is by no means regular; there is a marked tendency to the formation of foci where the disease makes itself at home. At such a focus the cases do not occur all at once, they follow one another, and it is often possible to show an immediate relationship between them. For example, first a visitor is taken ill; after a few days one or other member of the family where the patient was nursed falls ill; then follow quickly, or perhaps at intervals of greater or less duration, cases amongst the family, or dwellers in the same house, or amongst the neighbours, relatives or friends who came to the infected house. From the first focus new foci are thus developed, the cases following one another more or less like the links of a chain. But it is not to be expected that every link in the chain of cases should be equally plain. It is not possible so closely to follow the movements of a population as to find out every individual who may have come directly or indirectly in contact with cholera. If every case of cholera was from the first so severe as to necessitate medical treatment, and if the infection ceased with convalescence, then, indeed, in spite of all, we might hope with the aid of bacteriology to be able to find every link in the chain of events. We are now, however, aware that along with the severe cases there are a number of attacks which are so slight as to be usually quite unrecognisable; we know also that the cholera attack is only the most striking part of the illness; the infectious material may be contained in the excreta both before and after it—that is, at a time when the individual is not suspected at all of being dangerous to others or has been released from observation as recovered.

Finally, we must remember that the infection by no means always comes directly from the patient himself. Much more often the poison is conveyed indirectly by linen, clothes, beds, food, insects and so on. Considering all this, it is not surprising that, though in the country districts it may sometimes be possible to follow the course of events with tolerable exactness, this is often entirely impossible in great centres of population. It is especially difficult to obtain a good survey of this type of diffusion, because it occurs almost solely amongst the lowest, most crowded and most fluctuating portions of the population, seldom attacking the better situated classes. It must, however, not be supposed that an epidemic of cholera necessarily assumes and retains during its whole course one or other of these types; they frequently occur together. Thus the first, or explosive, type usually occurs alone at the beginning and gradually gives way to the second type, into which it finally lapses; or a localised epidemic may begin under the second type until accidentally some infectious matter finds its way into the water-supply, causing, according to the circumstances, either limited explosions or the sudden infection of a whole locality. It must be noted that the form of the cholera curve is not sufficient to decide the type. The curve may be very low and still be that of an epidemic caused by infection of the water-supply. This occurs when the number of bacilli is small in proportion to the amount of water, so that the poison is much diluted; on the other hand, it might well happen that several foci arising at the same time would give the curve the appearance of the first or explosive type, when the epidemic should properly be classed as belonging to the second or focal type. If error is to be avoided every localised outbreak must be carefully examined in order to ascertain how much the one or the other type is represented. The summer epidemic in Hamburg belonged at first exclusively to the explosive type; at its very beginning there was no direct connexion between the cases, but everything pointed to the harbour as being the sole source of infection. The relationship of the Hamburg water-supply to the Elbe—and indirectly to the harbour—led to the fear that an explosion would occur, and the results justified this anticipation. Towards its end the epidemic passed into the second type. The winter epidemic in Hamburg, on the other hand, retained during its whole duration the second type; it had from the beginning the tendency to form foci. One of these foci was in the Neustadt, a second was in St. George district and the third was in the suburb of St. Pauli. Whether all three foci stood in connexion with one another or not could not be ascertained with certainty; but it does not seem to be probable that this was the case. The appearances

rather favour the belief that the two first-mentioned foci arose from undiscovered stragglers of the summer epidemic which ceased on Oct. 23rd. On Nov. 9th and 11th cases of true cholera were diagnosed, and they were probably not the only ones which occurred. If the winter epidemic began on Dec 6th there was an interval of at most four weeks between the two Hamburg epidemics; and it is not necessary to presuppose that there was a fresh introduction of the infection; indeed, I do not know whence the cholera could have been brought, for at that time the epidemic was everywhere extinguished. It may be doubted whether the cases in St. Pauli should be called a focus; some of them may, in all probability, be referred to Altona and others stand possibly in relation to the focus in the Neustadt, so that very few remain unaccounted for. It was characteristic of the winter epidemic that the cases occurred exclusively amongst the lowest classes of the population, such as homeless and destitute persons, drunkards and men without work, who were housed in casual wards, night refuges and ginshops. With the exception of slight attacks a direct or indirect connexion was everywhere traced to previous cases of cholera. This proof of the origin of the cases was due to the very thorough investigation to which each case was subjected by the sanitary police. A superficial examination, such as was formerly customary under similar circumstances, would not have discovered the relationship between the cases.

Any such universal cause as soil or water could be with certainty excluded in this epidemic. The water-supply could not be suspected, since the infected region did not correspond with it. The soil might have been regarded with suspicion, because the cases occurred only in certain localities, but this suspicion ceased as soon as it was found that with the removal of the sick and possibly infected persons the attacks ceased, whereas had they depended upon the soil the remaining inhabitants would have suffered. There remains then no other possible way to account for the spread of the disease except the conveyance of infection from person to person, and the connexion traced in the majority of cases with persons known to have suffered from cholera is distinctly in favour of this view.

The cholera infection, it must be remembered, behaves quite differently from that of measles or small-pox, in which simple contact or even a temporary stay in the sick-room is sufficient to cause infection. Such an immediate conveyance of cholera only occurs occasionally and could only be accepted as an explanation when several cases in one family occur at intervals corresponding with the known period of incubation. Something of this kind occurred in Hamburg when in each of two families four cases followed each other. For the remainder the infection seems to have been always indirect, without its being possible to ascertain by what means the infection was conveyed from one person to another. This behaviour of cholera calls to mind what has been frequently noticed on military transport ships and ships conveying pilgrims, where for several weeks cases of cholera have followed one another at intervals amongst people who were crowded densely together and who lived under the most insanitary conditions. One of the most characteristic examples of this kind of cholera epidemic occurred on board the Italian emigrant ship *Matteo Bruzzo*, an example which is so instructive that it ought not to be allowed to pass into oblivion. Although in the winter epidemic the water-supply could not be regarded as being an active factor, still, in the case of two ships whose crews were attacked as they lay in the harbour of Hamburg, the influence of the water could not be denied. The first of these two ships was the Spanish steamer *Murciano*, which lay at first at the Asia Quay close to a watercloset which was said to have been used by a workman who was suffering from cholera. On Jan. 8th two of the crew of the *Murciano* were admitted into hospital suffering from cholera; the other members of the crew were removed from the ship and a close examination resulted in the discovery amongst them of four other cases. Thereupon the *Murciano* was brought to the strand harbour, where the frozen waterclosets on board were thawed and the ship was disinfected. In this second position she was moored alongside the steamer *Gretchen Bohlen*, amongst whose crew of negroes cholera broke out on Jan. 15th, three days after the *Murciano* had been moored. Two of the crew of the *Gretchen Bohlen* were first admitted into hospital, and a further investigation resulted in the discovery of four slight cases. When the first cases on board the *Murciano* were discovered it was at once suspected that the above-mentioned closet had through immediate infection given rise to the outbreak. Against this view, however, was the circumstance that of the twenty-four persons composing the crew (it was not certain that any of them had used the closet) six of them were at once attacked, whereas no case occurred amongst the numerous harbour workmen and others for whose use the closet was placed. It seemed to be much more probable that the infection did not arise directly through using the closet, but indirectly from the fact that the contents of the closet flowed into the harbour water, and that this water, which was used for drinking and cleansing purposes, infected the crew. The drains of the Hamburg quays do not join the drainage system of the city, but they flow directly into the harbour, so that the sewage from the quays is washed up and down amongst the ships by the ebb and flow of the tide. In this way the contents of the above-mentioned suspected closet and any cholera germs that were present could find ready access to the ship lying at the quay.

REPORT OF THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

AFTER a sitting lasting forty-five days, of which thirty-two were occupied in hearing oral evidence, the Royal Commissioners appointed for the purpose of ascertaining whether the sources available within the water-sheds of the Thames and Lea are adequate in quantity and quality for the water-supply of the metropolis, have presented their report to Parliament. The inquiry has been divided into two divisions. The first of these comprised the evidence as to the individual circumstances of the water companies at the present time, and the anticipations of the future which might be based upon them; and this division of evidence was taken before the end of July, 1892. The sittings since October, 1892, have been mainly devoted to the second division of the evidence, which included the evidence of engineers, geologists, chemists and bacteriologists bearing upon the subject as a whole.

FUTURE POPULATION AND AREA OF SUPPLY.

In considering the question of future requirements the Commission have been led to regard as a satisfactory basis of calculation the area conveniently known as Greater London. This covers 701 square miles and is the area contained in a circle drawn round Charing-cross as a centre with a radius of fifteen miles. To this area, however, have been added certain parts of "Water London" which lie outside Greater London. The Commissioners assume that the most recent rate of growth in the past—viz, that of the last decennium will be maintained in the future; that is to say, that the population will continue to increase at the rate of 18·2 per cent. decennially or in the ratio of 1·68458 per cent. annually. Assuming this to be the future rate of increase in the population of "Water London," the aggregate population in 1931 (forty years hence) will be in round numbers 11¼ millions in the area of which the water requirements have to be considered—viz., 845 square miles. The statistics of 1891 show further that the average consumption for trade and domestic purposes does not exceed 32·68 gallons per head per day, but after considering the evidence given on this point the Commissioners have adopted 35 gallons as a safe basis of calculation for future daily requirements, so that in 1931, according to the above estimates, the daily output required would be 391,717,690 gallons, but allowing 6 per cent. for increased demands the Commissioners arrive at 415,219,752 gallons as the daily quantity that should be provided. The quantity at present provided is between 171 and 182 million gallons daily, but the companies propose to provide a supply equal to a total of 440 million gallons per day, to be derived from the Thames, with additional storage; from the Lea with the projected storage of the East London Company; and from certain chalk springs and wells.

With regard to the objections raised to new sources of supply, the evidence of engineers and other professional witnesses does not appear to justify the belief that the pumping of additional water from chalk wells by the New River and East London Companies has produced as yet any permanent appreciable depression of the water levels either in Hertfordshire or the upper part of the Lea Valley, although such pumping may temporarily affect to some extent the height of water in wells in the immediate neighbourhood of

the companies' works; but whether the quantity could be increased to five times the present take is doubtful. There is water said to be constantly passing in considerable volume from the north and north-west to the south-east under the pumping stations in the Lea Valley, and ultimately finding its way into the bed of the Thames some distance below London. Summing up the evidence on these points, the Commissioners express the opinion that the following quantities (total) of water from the sources indicated are available:—From the Thames, 300 millions; the Lea, 52½ millions; wells in the Lea Valley, 40 millions; wells in the Kent Company's district, 27½ millions; in all, 420 millions of gallons per day—that is, sufficient at 35 gallons per head per day for a population of 12,000,000.

QUALITY OF THE WATER.

Despite the considerable amount of evidence brought before the Commission as to the chemical constitution of the Thames and Lea supplies, not a single witness founded upon this constitution any charge of unwholesomeness against the water as delivered to the consumer. Bacteriological examination, too, has failed to show the presence of pathogenic organisms in the water of these rivers, although a most minute search by two processes has been made. First, a considerable volume of raw river-water was passed through a Pasteur-Chamberland filter and the sediment examined; second, the gelatinous layer of living microbes on the surface of a filter of one of the London companies was similarly examined. The material so obtained was submitted to the most delicate of modern tests for the detection of typhoid bacilli (Parrieti's method), but in no case was this bacillus found to be present.

These results are fully borne out by the evidence of experience; for the Commissioners report that, notwithstanding the fact that for more than thirty years the inhabitants of London have been drinking water taken from the Lea and the Thames, the medical officers of health, and the analytical and bacteriological experts examined before the Commission, have one and all stated that they knew of no single instance in which the consumption of this water had caused disease. The conditions which militate against the increase of pathogenic organisms—viz., exposure to light, healthy environment, attenuation, to which may be added the extraordinary microbe filtering powers of the gelatinous material which is deposited on the filters—are quoted as affording an explanation of this remarkable conclusion.

With regard to the prevention of pollution the Commissioners observe that in order to preserve the wholesomeness of the water as delivered to the consumer all possible vigilance should be exercised to prevent unnecessary contamination of the Thames and Lea, to ensure the thorough treatment of all sewage before it is allowed to flow into rivers, and to enforce the adequate storage and filtration of such water as is abstracted at the in-takes. It is pointed out that in a very large proportion of cases the pollution recorded was preventible and illegal, being in direct contravention of the Rivers Pollution Prevention Act. The appointment of an authority to check this evil is strongly advocated.

No exact regulations as regards filtration are laid down in the report, but it is urged that all matters relating to the efficient filtration of water should be entrusted to the public water examiner, who should have the legal right of entry into all the works, and the duty of reporting periodically as to the due observance of the conditions, which the Commissioners recommend should be drawn up after competent inquiry.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual Calendar has just been published by the Council of the College. From this Calendar we ascertain the following facts, namely: There are 1122 Fellows on the roll of the College, of whom 866 obtained the Fellowship by examination, 15 were elected as Members of twenty years' standing under section 5 of chapter 15 Vict, and 2 are *ad eundem* Fellows. There are 17,043 Members and 695 Licentiates in Midwifery. The Licentiates in Dental Surgery are stated to number 846. Holders of the Diploma of Public Health (granted by the Royal Colleges of Physicians and Surgeons) number 163.

During the past collegiate year 777 candidates presented themselves for examination in Elementary Anatomy, of whom 626 passed and 151 were referred; 458 candidates presented themselves in Elementary Physiology, 383 of whom passed and 75 were referred; 234 candidates presented themselves in Elementary Biology, 169 of whom passed and 65 were referred. The examiners are appointed in conjunction with the Royal College of Physicians of London under the Scheme for an Examining Board in England. The fees paid by candidates for this examination amounted to £3971 2*s*., the examiners receiving in fees £584 5*s*. Of 743 who presented themselves in Chemistry 454 passed and 289 were referred; in Materia Medica, of 728 candidates 427 passed and 301 were referred; in Practical Pharmacy, of 40 candidates 28 passed and 12 were referred. The Examiners in Chemistry, Materia Medica and Practical Pharmacy are elected by the Royal College of Physicians of London.

The Examiners in Anatomy and Physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians; they have conducted the Primary Examination under the old regulations as well as the Second Examination of the Examining Board; 815 candidates presented themselves for examination in Anatomy, of whom 490 passed and 325 were referred; 945 candidates presented themselves in Physiology, 538 of whom passed and 407 were referred. The fees paid by candidates for these examinations amounted to £4096 1*s*., the examiners receiving £1561.

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow, elected annually by the Council, held during the past year two examinations: 149 candidates presented themselves, of whom only 55 passed, whilst 94 were referred. The fees received amounted to £992 5*s*., of which the Board received £617 10*s*.

The Court of Examiners, ten in number (five of whom are also on the Council), are elected by the Council from the Fellows of the College for a period of five years. They conduct the Third or Final Examination in "Surgery" of the Examining Board as well as the Pass or Final Examination under the old regulations, and Pass or Final Examination for the Fellowship. During the year the court has held two examinations for the Fellowship and four for the Membership; at the former there were 74 candidates, 48 of whom passed and 26 were referred. For the Membership 937 candidates presented themselves for examination in Surgery, of whom 578 passed and 359 were referred. The fees paid by candidates for these examinations amounted to £10,309 2*s*., and the fees paid to the Court of Examiners and the Examiners in Midwifery amounted to £5584 16*s*. The Examiners in Medicine under the Scheme are elected by the Royal College of Physicians. Of 835 candidates who presented themselves for this examination during the year, 534 passed and 301 were referred. The Examiners in Midwifery are appointed in conjunction with the Royal College of Physicians, and have examined 844 candidates, 553 of whom passed and 291 were referred.

The Board of Examiners in Dental Surgery have held two meetings for the examination of 92 candidates, 57 of whom received the diploma and 35 were referred. The fees paid by them amounted to £598 10*s*., the board receiving £386 8*s*.

The Examiners in Public Health, appointed in conjunction with the Royal College of Physicians, have examined 56 candidates in Part I., 46 of whom passed and 10 were referred for six months; for Part II. 58 candidates presented themselves, 37 of whom received the diploma and 21 were referred for six months. The fees received for both Parts amounted to £282 9*s*., the examiners receiving £239 8*s*.

With regard to the finances of the College, it appears that the income from all sources amounted to £28,848 17*s*. 10*d*., the largest receipt being derived from fees paid by candidates for the diplomas of the College—viz., £20,249 9*s*., the next largest item being from dividends on the Erasmus Wilson bequest, £5013 2*s*.; rents from chambers adjoining the College produce £750; investments, £668 17*s*. 4*d*.; hire of rooms at Examination Hall (half receipts), £588 17*s*. 5*d*.; fees retained for referred candidates, £545; law expenses (repaid by Steele and others), £362 14*s*. 4*d*.; from Trust funds, £252 1*s*. 8*d*.; sale of stock, £58; incidental receipts (sale of calendars &c.), £24 12*s*. 10*d*.; balance at bankers, 1892, £336 3*s*. 3*d*.

The expenses for the year amount to £27,368 9*s*. 5*d*. (leaving a balance of £1480 8*s*. 5*d*.), the largest item being for fees to examiners, £8973 7*s*.; expenses of examinations, £253 6*s*. 1*d*.; half expenses Examination Hall, £4645 5*s*. 3*d*.; half expenses research laboratories, £861 2*s*. 8*d*.; extra-

ordinary expenses (i.e., drainage work, furniture and fittings &c.), £2109 18*s.* ; rates, taxes and insurance absorb the sum of £1139 19*s.* ; alterations and repairs, £638 19*s.* 6*d.*; salaries, wages and pensions in the three departments (museum, library and office), £5068 18*s.* 4*d.* ; lectures, specimens, catalogues &c., for museum, £589 19*s.* 1*d.* ; purchase of books &c., for library, £692 18*s.* 7*d.* ; fees to Council, £246 15*s.* ; fees returned to candidates, £551 5*s.* ; Trust funds, £287 9*s.* 8*d.* ; under miscellaneous items (i.e., fuel, light, printing and stationery), £1045 10*s.* 11*d.* has been expended.

During the past year, in addition to the ordinary work, consisting of repairs and remounting spirit preparations and skeletons, the museum has been enriched by upwards of 600 specimens by donation, purchase or from the College stores. An increasing amount of pathological material has been received in the workroom and an additional number of medical practitioners have availed themselves of the privilege accorded by the College of sending specimens to be dissected, examined and reported upon by the pathological curator (Mr. J. H. Targett). Good work has also been done by Mr. R. H. Burne, anatomical assistant, and by Mr. William Pearson, prosector to the College.

From the librarian's report it appears that the supply of new books has been well kept up and several new journals have been added to the library. A large collection of Russian dissertations, together with a printed catalogue of them, has been presented by Dr. Theodore Maxwell. Most of the sets of the American journals which were incomplete have been made perfect; Dr. J. S. Billings kindly presented to the College a large number of volumes and parts for this purpose; the remainder were obtained by purchase. The collection of portraits has been largely increased by the addition of Mr. T. Madden Stone's collection of medical portraits which he has generously presented to the College. By this gift 502 portraits have been added to those already in the library. In addition to these there were many portraits in Mr. Stone's collection which were already in the College; it is hoped that these duplicates may be exchanged and that by this means the College collection may be still further increased. Including journals and transactions the total number of volumes in the library is about 46,000.

In the secretary's report will be found an abstract of the work done by the Council of the College, the committee of management at the Examination Hall, the laboratories on the Embankment, the finance committee, statement of elections &c. During the year two members were removed for misconduct.

DUTCH LABOURERS.

THE very elaborate report upon the conditions of labour in Holland, which has recently been issued by the Royal Commission on Labour, gives a very striking, and for the most part a very unsatisfactory, picture of the Dutch working man. His condition has recently been made the subject of inquiry by a commission appointed by the Dutch Government, and it is from the evidence collected by this commission that our own Royal Commissioners have in the main derived the materials for their report. Its publication, though a matter of great interest, can hardly be of any direct service to the working classes of our own country. The Dutch seem, as here portrayed, to be reaching at the present time a point in their industrial history which was passed in our own annals in the earlier half of the present century. Thus the inspection of factories is a task only very recently taken in hand, and the organisation of the labouring classes is a thing which as at present existing presents more analogies to the middle-age guilds, with their insurance benefits, than to the modern trade union with its eye to the enhancement of wages. But whilst the general condition of the labouring classes is in these respects so far behind the times it has of course happened that Holland has shared in the industrial progress which invention and discovery have brought about; and thus there is in Holland the curious spectacle of railways and engineering works on a large scale carried on by labourers who are accustomed to a standard of living differing but little from that of the eighteenth century. In these circumstances it would not be surprising if no attempt had been made to protect the railway servants from the extreme consequences of unmitigated competition and we read without astonishment that a Royal decree intended to regulate their hours of labour has proved inefficient. That some regulation is needed, not only in the interest of the men considered as a class but also in the interest of the public service, is manifest from the mere circumstance recorded in this report that "engine drivers and stokers are frequently on duty for seventeen, eighteen or twenty hours consecutively"; that "guards work from seventeen to eighteen and a half hours daily, and pointsmen about twenty hours"; that "signalmen may be kept on duty sixteen or seventeen hours a day without ever getting a day free."

In Holland as with ourselves one of the most difficult of industrial problems is presented by dock labour, where the irregularity of the work inflicts a hardship which it seems impossible to avoid upon a peculiarly defenceless, because largely unskilled, class of labourers. A difficulty of the same kind, which is, however, peculiar to the Low Countries, arises from the popularity of the windmill. The reporter says what is obviously true when he observes that the great disadvantage of dependence upon wind power is its inevitable irregularity. It must be admitted that the Dutch workman exhibits great complacency in accommodating himself to the disadvantage of his position, since it is possible to write of his employment to the following effect: "Windmills have no regular hours. When the wind blows the men work twelve, sixteen, eighteen, or even twenty hours consecutively; and if the wind rises suddenly they are liable to be summoned at any hour of the night." It is perhaps due to the circumstance that windmills are not aggregated in towns, but widely distributed over a great extent of country, that the labourers occupied in them should be so compliant. Naturally enough it is in the great centres of population like Amsterdam and Rotterdam that labour organisations first make their appearance. The scarcity of such spots in Holland is no doubt the principal reason for the existing condition and temper of its labouring population.

Whilst the Dutch labourer thus submits to very long hours and very small pay, it would not seem that these conditions tend very clearly to economy in a commercial sense. The inferiority of Dutch work to that of the more highly paid operatives of France and England appears to be admitted, and an attempt is made to trace the connexion between these various features of the whole situation in the following remarks.

The unsatisfactory nature of the food generally consumed amongst the working class is probably as much the cause as the effect of low wages. Mr. Falkenberg draws attention to the fact that a working man cannot maintain a proper condition of health and efficiency on food of such a kind and quality. In support of this opinion he quotes from two workmen's budgets published in 1889. In the first case the family consisted of the man (a smith), his wife and five children. The man's wages were 8 fl. a week, out of which, when rent &c. had been paid, 3·50 fl. remained for food. The expenditure for bread was 2·64 fl., so that the mid-day meal for seven persons during the whole week had to be provided for 1·31 fl. The second case was that of a family at Amsterdam, where the husband was a cigarmaker, the wife a charwoman and where there were three children Out of a joint income of some 10 fl., 6·38 fl. was spent on food. Bread came to 3·16 fl., potatoes and greens to 1·47 fl., coffee and milk to 1·5 fl., meat to 70 cents. "This family," says Mr. Falkenberg, "though better off than the first one, spent very little on meat and nothing on peas, beans, bacon or butter." An extra glass of milk or an egg for a sick child are considered luxuries quite beyond the reach of a working-class family.

There is probably some substance in this contention, and indeed the moral which the object-lesson of Dutch labour serves to point out would seem to be that industrial efficiency can only be attained by such hygienic conditions as allow the individual workman to develop his full powers and that when a body of workmen have fallen into abject poverty the main obstacle, or at least one main obstacle, to their rise is presented by the lethargy and want of capacity which are the direct results of the privations which extreme poverty entails. In other words, it is the old rule, with perhaps a somewhat modern meaning—*salus populi suprema lex.*

ANONYMITY IN JOURNALISM.

M. ZOLA'S address upon Anonymity in Journalism, which was anticipated with much interest, was delivered before the Institute of Journalists on the 23rd inst. M. Zola forcibly pointed out the advantages of anonymity in the treatment of political questions, but he spoke of the dangers of the depreciation of the value of criticism and of the swamping of individual critical merit when anonymity was carried into other fields, such, for instance, as that of literary criticism. Most able men who have gone through the fire of criticism have felt disposed at times to formulate the requirements for useful criticism. Lord Beaconsfield somewhat ill-humouredly dismissed the subject by defining critics as "those who had failed in literature and art." So sweeping a generalisation, however effective it may be as a postprandial *bon mot*, has usually been considered to be unjust and incorrect, as epigrammatic generalisations are apt to prove on maturer consideration. A great critic need not be a great creative writer; indeed, we are inclined to think that the latter qualification is inimical to sound criticism, as the original thinker and writer is apt to regard the rest of mankind and their works too much through his own spectacles. It is related of James Hogg, "the Ettrick Shepherd," that he objected to the melodiousness of Moore's poetry as being "ower sweet," and that he knew he was correct in his judgment because his own ear was "just recht." M. Zola, however, treated the whole subject with the philosophic insight which was to be expected of one of his observant genius. In comparing the French with the English Press he attributed the difference in their methods in a great measure to the ethnological differences of the two races. The former, he said, were always looking for a Messiah, and they hastened to welcome a leader—a Napoleon, a Gambetta or even a Boulanger; whilst newspapers were apt to become the incarnation of a man. "Rochefort's paper, Clemenceau's paper, Paul de Cassagnac's paper—all the other members of the editorial staff disappear. There remains but one man; the paper is bought for that man alone." It appears, however, from subsequent comments on M. Zola's speech that the French taste for individual distinction in the public Press was willingly gratified if not initiated by an edict of the Second Empire, which insisted upon the signature of writers being appended to their articles, so that there might be less difficulty in punishing inconvenient critics. Such a fact will be regarded by most as an argument for anonymity in that section of the Press in which M. Zola admits it has advantages.

His remarks are not without interest to medical journalists and as regards THE LANCET in particular. It is conceivable that the interests of a profession may be so monopolised or disorganised that they may invite or induce the advent of a leader or reformer. These are the circumstances in which a journal may, with advantage to all concerned, become "the incarnation of a man." What we have suggested as conceivable actually existed at the date of the founding of THE LANCET. The "visiting apothecary" was but the feeder of his more distinguished *confrère*—if, indeed, the latter would have permitted a term of so much familiarity to be thus employed—and the services of the profession in general were inadequately rewarded in most departments of its activity. The social status of all except the most distinguished was such as the disciples of a liberal profession could scarcely regard with satisfaction. Amidst such conditions THE LANCET—the "incarnation" of Thomas Wakley—was founded. The *rôle* of a protagonist is never conducive to personal comfort. The experience of the founder of THE LANCET was no exception to this rule. That many beneficial reforms in the profession are due to that independent medical journalist is undeniable and that much still remains for journalistic advocacy to achieve is admitted; and if we pursue our courses collectively with the foresight and fearlessness of one who never desired shelter by anonymity we doubt not but that our efforts will result in a continuation of the good work which he initiated.

There is, we think, in the medical journalism of to-day a happy combination of the advantages of anonymity and of signed articles. Scientific journalism is, perhaps, of too technical a character to come within the sphere of literature in its strictest sense; but in medicine, as in history, and, indeed, in science generally, there are opportunities for making the dead bones of exact observation live when they are clothed in the rich language which is available in our mother tongue. In the original articles of such journalism the individual has every opportunity of showing his quality as an observer, a thinker and a writer; whilst the collective force of professional opinion finds utterance in articles for which the editors are solely and actually responsible.

The anonymity of literary criticism stands upon a somewhat different basis from the expression of opinion on topics of more general interest. Even here, however, it has its advantages, for the collective or editorial reputation of a journal confers an authority upon the unknown critic which his personality alone might not entail. Not that the criticism of the unknown may be of little value, but that we must in a measure take human nature as we find it. There is some truth in the saying of a cynical critic that "all this would have been very fine if written by a somebody; it is of little consequence because written by a nobody." M. Zola, however, we think, rightly infers that the signing of articles by a "nobody" who is capable of becoming a "somebody" would hasten the recognition of such a writer. We are not without such opportunities of personal distinction in England, as our numerous reviews, to which he alluded, afford ample opportunity to those who are desirous and capable of personal distinction. The natural and just corollary to the abandonment of anonymity in such matters would, however, be the personal responsibility of writers in actions at law, and with this, if need be by statute, a very considerable abrogation of the responsibility and functions of editors and proprietors. As, therefore, it is usually found that responsibility and efficiency go hand-in-hand we are inclined to think that the practical insight of the Anglo-Saxon has decided wisely that collective responsibility, personified in the editors of most of our journals, promotes the efficiency of all the members of the editorial staff better than the excessive individuality of our talented neighbours. It, moreover, confers upon the whole an authority which the parts alone might not inspire or support. M. Zola concluded his eloquent address by picturing an all-potent Press in the future, having in its train a devoutly to be desired "universal peace and brotherhood of nations." Whilst the evolution of such a period of millennial order involves a multitude of factors, the coördination of which must ever prove to be a stupendous task, the history of the modern world has amply shown that the Press of countries whose interests from time to time run counter to one another has an enormous power and commensurate responsibility in embittering or improving the relations of nations in the struggle for existence. The higher, however, and more Utopian our ideal of the destiny of humanity the more likely are we to realise that peaceful and fruitful fraternity of nations which M. Zola and all lovers of our kind cease not to desire even amidst the din of warlike preparations and the perfecting of weapons of destruction.

ALIEN IMMIGRATION.

I.

THE questions to which the immigration of aliens into the more prosperous States of the Old and New Worlds gives rise are amongst the most interesting and the most difficult which can engage the attention of the social and

political philosopher. It is only when a strong inducement in the form of improved conditions of life is held out that people can be persuaded to migrate in large numbers from their native seats and establish themselves amidst unfamiliar surroundings upon foreign soil; and, in view of this fact, there is much force in the generous sentiment which is attributed to an American labourer that "everybody has as much right to a home in this country as I have." Yet there is another aspect to this fact. If the conditions of life in a distant country appear to be highly desirable, that may be because the conditions of life at home are extremely unfavourable, and it is the very worst feature of unfavourable conditions of life that they tend, not only to rob their victim of the advantages which may at the time be fairly considered his due, but also to demoralise him and to make it difficult for him to take advantage of happier circumstances even when the opportunity of doing so presents itself. The "iron enters into the soul" and the labourer, who has struggled on perhaps for many generations under depressing influences at home, carries degradation with him when he goes abroad, and like the barbarian hordes which overwhelmed the Roman Empire he destroys the civilisation which he is incapable of appreciating. In this view, then, it is plain that there is the most cogent reason for withstanding the incursion of degraded peoples into regions which have been cultivated by some more gifted race and made ministerial to higher uses than those to which alone the inferior race directs its energy. Hence arises the perplexity. Where does the legitimate defence of civilisation stop and the mere selfish greed of possession come in? To answer this question in general terms is probably not possible, and in many cases which actually arise it is not easy to decide where the line should in practice be drawn. It is therefore a matter of the greatest interest and importance to be able to observe how the practical question has been formulated and answered in a neighbouring country, and there could hardly be a more suitable field for the experiment than that which is presented by the United States of America. It is, therefore, with the greatest interest that we have perused the very painstaking report which has been prepared at the instance of the Board of Trade by Messrs. Burnet and Schloss, two officers of the department to whom the preparation of labour statistics and the oversight of labour questions, so far as the department is concerned with them, is regularly committed. These gentlemen were instructed to proceed to America and to conduct an inquiry on the spot into the nature and working of the American laws relating to alien immigration, and it must be admitted that they made exceedingly good use of the time and opportunities at their disposal, and they have produced a report which is in all respects a very remarkable and valuable contribution to the discussion of a question of vital interest to the communities both of the United States and of this country. The questions to which they devote attention, although touching the high ethical ground to which we have already referred, have very naturally presented themselves to practical men, whether politicians or economists, under homelier aspects. The objects of legislation in reference to these matters are distributed in the report under three heads—that is to say (1) *moral grounds*, upon which convicts and other persons of known bad character may be excluded; (2) *sanitary grounds*, which may be roughly identified with medical inspection and quarantine; and (3) *economic grounds*, which lead to the exclusion of such persons as are likely to become a public charge or by their competition prejudicially to affect the condition of some one or more classes of persons—chiefly, of course, labourers—who are already settled in the country.

There is thus brought into view a large and most extraordinarily complicated body of considerations. The machinery which is adapted to the one purpose is wholly unsuited to another—for example, the medical staff which can deal with the sanitary problem is quite unsuitable to consider questions of economic fitness and their labour would be simply wasted upon the work of determining whether a particular industry would be benefited or harmed by the accession of a body of foreign immigrants to its ranks. Thus in practice the supervision of immigration has to be confided to two wholly independent bodies of public servants and the work gives employment to two separate departments of the administration. It is not at all surprising to find that very different measures of success appear to be attained in the two departments, and as each presents a most valuable object lesson for English readers we propose to deal with them in separate articles.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Oldham Urban Sanitary District.—Dr. James Niven's report for the borough of Oldham during 1892 contains some very interesting matter. With a view to diminish the risks of the spread of small-pox from unrecognised cases, notices were circulated amongst the householders requesting that the attention of the medical officer of health might be drawn to any instance of "breaking out on the face or arms," to any case of chicken-pox, or to any unusual form of measles. In view of the danger from cholera an additional inspector was appointed for a period of twelve months and he is prosecuting a house-to-house inspection of the worst parts of the district. Dr. Niven points out that this addition is not sufficient when the additional duties devolving upon the department—such, for instance, as the Factory and Workshops Act—are taken into consideration. Dr. Niven is evidently a strong supporter of the notification of phthisis and has taken energetic steps towards educating the people of Oldham as to the infectious nature of the disease. He also advocates the provision of isolation hospitals for the isolation of those cases of phthisis likely to cause infection. In referring to the recent prolonged lock-out at Oldham Dr. Niven tells us that the effect upon the health of the town has not been, so far, appreciable, and he draws attention to the fact that although during times such as these the rations are scantier the workers, on the whole, have less wear and tear and live a more healthful existence. It is, however, in connexion with small-pox that Dr. Niven's report presents a peculiar interest, and it will certainly be well for all those interested in the disease and its relation to vaccination to read carefully this part of the report. In the first place, it is interesting to note that in Oldham, unlike so many other places, the spread of small-pox was due in only a very small degree to the influence of tramps, the chief agent having been the overlooking of slight cases. It was said that some cases were caused by the sale of second-hand clothes, but Dr. Niven was unable to obtain any evidence on this point. In discussing the effect of the unrecognised cases in spreading the disease, Dr. Niven points out that these unrecognised cases were, in nearly every instance, of a trivial nature, the mildness of the attack being due, in large part at least, to the effects of vaccination. We referred briefly in an annotation in our issue of the 16th inst. to the influence which the West London Hospital had in spreading small-pox in its vicinity, and we can only here mention that Dr. Niven, after considering the evidence brought to light by the Fulham inquiry, together with that resulting from his own investigations, is of opinion that a small-pox hospital should be at least three-quarters of a mile from a centre of population. To the question, Should small-pox be treated in the same hospital precincts as other fevers, Dr. Niven naturally gives a negative answer, and he shows how at Oldham, in spite of numerous precautions "on three separate and independent occasions, small-pox made its appearance on the fever side." As a consequence of this it was decided that unvaccinated children suffering from scarlet fever could not be admitted into hospital. We have no space here to notice in detail Dr. Niven's remarks on vaccination and the figures yielded by the Oldham outbreak; it must suffice to say that they are in every way satisfactory.

Essex County Sanitary District.—It is somewhat difficult to know what title we ought to accord to Dr. Thresh in describing his relations to the Essex County Council. The term "medical adviser" seems hardly applicable; at any rate, we believe we are right in stating that Dr. Thresh's chief function is to summarise the reports of the district medical officers of health. In the summary for 1892, which he has just presented to the Contagious Diseases (Animals) Committee, Dr. Thresh states that certain of the reports cannot be considered very satisfactory; but, he adds, "I should be exceeding my duty were I to criticise them." The necessity for obtaining a county medical officer of health is insisted upon in the prefatory remark, and the attention of the council is drawn to the advantages which would accrue from such an appointment. The death-rate in the rural districts of the county was higher than in the urban both during 1891 and 1892, and this is partly accounted for from the fact that

influenza was more fatal in the villages than the towns, and also Dr. Thresh thinks, to more attention being paid in towns to water-supply &c. than is the case in rural districts. The death-rate in the rural districts during 1892 amounted to 17 7, as against 16 7 in the urban districts. The general death-rate of the county is considerably in excess of that of Surrey, with which county Dr. Thresh compares it. As regards phthisis, it is interesting to observe that, in spite of much of Essex being low-lying and marshy, the death-rate from this disease is not excessive. Diphtheria has increased, especially in the rural districts of the county, but it appears that this increasing prevalence has not been accompanied by any increase in malignancy. The case mortality, however, varied enormously in the several districts. As regards enteric fever, it appears that Southend presents a sickness and death-rate considerably in excess of any other district, and, according to the medical officer of health of that town, the greater number of cases were due to sanitary defects. Dr. Thresh has made use of one of the "sanitary diagrams" of the county, to indicate the hospital provision of the various districts, and this is a plan which we think might with advantage be more widely made use of. It appears that in several of the districts there is no hospital accommodation whatever, and Dr. Thresh states that "taking the county as a whole the provision made for combating any serious outbreak of cholera, small-pox or other dangerous infectious disease is obviously most inadequate," and he contemplates that this unsatisfactory condition of things will continue until the Infectious Hospitals Bill becomes law. There seems to be much room for improvement as regards the water-supplies of the rural districts of the county. Dr. Thresh has made inquiry into the death-rates from enteric fever of all districts abutting upon the Thames, both in Essex and Kent, and he has brought to light the very interesting fact that there is a much greater incidence of the disease in those districts near the river than in those further removed from it. This discovery certainly affords tempting ground for further investigation and it may well be left in Dr. Thresh's hands.

Sheffield Urban Sanitary District.—The population of this important borough in 1892 was estimated at 329,585 and in commenting upon the fluctuations in the several parts of the district Dr. Harvey Littlejohn expresses regret that there is not a tendency amongst the more crowded areas to migrate to the suburbs. Apparently workmen's tickets are not issued at Sheffield. The general death-rate for the year under review was for Sheffield a low one, being 20·7, the lowest rate recorded within the last decade, with the exception of the year 1886, when it was 20·1. The comparative mortality figure for 1892 was 1218. As regards small-pox, it seems that 87 cases of the disease were treated in Lodge Moor Hospital during the year, and it is satisfactory to hear that, although some of the other pavilions on the same site were occupied by patients suffering from scarlet fever, no spread of small-pox to these patients took place. Dr. Littlejohn seems to have attacked the epidemic in a very determined manner and except for this it would probably have assumed more serious proportions. In discussing some of the reasons why the disease did not prevail more widely Dr. Littlejohn points to the fact that there are very few unvaccinated persons in Sheffield, and that during the last epidemic a large number either suffered from the disease or had themselves revaccinated. Apart, however, from these important causes it seems that every case of small-pox was removed to hospital within a few hours of its notification, and the persons who had been exposed to the infection were in a large number of cases also isolated. These latter were with very few exceptions at once revaccinated and if possible kept under observation for sixteen days. The fact that amongst those so removed and revaccinated no case of small-pox occurred is one of considerable interest, more especially when considered together with the history of an outbreak which occurred at a factory where the girls refused to be revaccinated. The premises in question were visited daily and inquiries made as to any illness or absentees, and by this means five cases were recognised and the patients removed to hospital in the earliest stages of the disease. Whilst referring to the influence of navvies in spreading small-pox, Dr. Littlejohn makes the suggestion that contractors should be compelled to provide isolation accommodation for any of their employés who may fall ill, and he thinks that in Bills for projected railways clauses insisting on this provision should be inserted. An outbreak of diphtheria took place in two districts of the borough during the year. In one of these the cases occurred around the Board-school, and an inspection of the school revealed a deplorable condition of neglect as regarded the closets. Of 34 cases notified during March and April in the district in question 28 were attending this school, and, curiously enough, of this number 22 were females. The closets &c. both on the girls' and boys' sides seem to have been equally bad, and Dr. Littlejohn offers the suggestion that after the initial cases the spread of the disease was probably by direct contagion; if this be so, the fact that girls and infants are more prone to caressing than are boys might, he thinks, account for the peculiar sex distribution of the outbreak. There were 8 deaths recorded during the year as due to lead-poisoning in Sheffield, and of these 5 occurred in file cutters. In view of preparing for the possible advent of cholera, the sanitary authority voted £5000 towards the expenses of carrying out Dr. Littlejohn's suggestions. Active measures have, it appears, been recently taken against the smoke nuisance in Sheffield and the former limit of ten minutes per hour has now been reduced to six for the heavier trades and four for the lighter.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6113 births and 3897 deaths were registered during the week ending Sept. 23rd. The annual rate of mortality in these towns, which had declined from 22·8 to 19·8 per 1000 in the preceding five weeks, further fell last week to 19·7. In London the rate was 18·9 per 1000, whilst it averaged 20·3 in the thirty-two provincial towns. The lowest rates in these towns were 13·7 in Brighton and in Portsmouth, 13 9 in Derby, 14·4 in Croydon and 16·5 in Cardiff; the highest rates were 24·0 in Leeds, 25 0 in Liverpool, 26·8 in Sunderland, 26·9 in Blackburn and 30·3 in Preston. The 3897 deaths included 774 which were referred to the principal zymotic diseases, against 916 and 851 in the preceding two weeks; of these, 394 resulted from diarrhœa, 116 from diphtheria, 88 from "fever" (principally enteric), 86 from whooping-cough, 63 from scarlet fever, 21 from measles and 6 from small-pox. These diseases caused the lowest death-rates in Halifax, Plymouth, Croydon and Bristol; and the highest rates in Sunderland, Burnley, Preston, Hull and Gateshead. The greatest mortality from measles occurred in Burnley; from scarlet fever in Derby, Burnley and Huddersfield; from whooping-cough in Swansea, West Ham and Gateshead; from "fever" in Wolverhampton, Sheffield, Sunderland, Preston, Hull and Norwich; and from diarrhœa in Sheffield, Salford, Sunderland, Gateshead, Preston and Hull. The 116 deaths from diphtheria included 88 in London, 4 in Manchester and 3 each in Portsmouth, Birmingham and Leeds. Two fatal cases of small-pox were registered in London, 2 in Bradford, 1 in West Ham and 1 in Birmingham, but not one in any other of the thirty-three large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained 91 small-pox patients on Saturday last, the 23rd inst., against 144, 121 and 112 at the end of the preceding three weeks; 14 new cases were admitted during the week, against 24 and 20 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2848, against 2884 2883 and 2889, on the preceding three Saturdays; 318 new cases were admitted during the week, against 329 and 315 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 150 in each of the preceding two weeks, rose to 200 last week and were 27 above the corrected average. The causes of 61, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bristol, Oldham, Leeds, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·8 and 18·7 per 1000 in the preceding two weeks, further declined to 17·3 during the week ending Sept. 23rd, and was 2·4 per 1000 below the mean rate during the same period in the thirty-three large

English towns. The rates in the eight Scotch towns ranged from 12·0 in Perth and 12·4 in Greenock to 18·1 in Aberdeen and in Paisley and 18·3 in Leith. The 488 deaths in these towns included 53 which were referred to diarrhœa, 25 to whooping-cough, 14 to diphtheria, 6 to "fever," 5 to scarlet fever, and not one either to measles or small-pox. In all, 103 deaths resulted from these principal zymotic diseases, against 136 and 126 in the preceding two weeks. These 103 deaths were equal to an annual rate of 3·7 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 81 and 72 in the preceding two weeks, further declined to 53 last week, of which 25 occurred in Glasgow, 12 in Edinburgh and 7 in Dundee. The 25 deaths from whooping-cough exceeded the number in any recent week and included 15 in Glasgow, 4 in Edinburgh and 3 in Paisley. The fatal cases of diphtheria, which had been 9 and 13 in the preceding two weeks, further rose to 14 last week and included 7 in Glasgow and 3 in Greenock. The deaths referred to different forms of "fever," which had been 16 and 14 in the preceding two weeks, further declined to 6 last week, of which 3 occurred in Glasgow and 2 in Edinburgh. The 5 fatal cases of scarlet fever were within one of the number in the preceding week and included 4 in Glasgow. The deaths referred to diseases of the respiratory organs in Glasgow, which had been 60 and 67 in the preceding two weeks, further rose to 74 last week and exceeded by 8 the number in the corresponding week of last year. The causes of 24, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·9 and 28·3 per 1000 in the preceding two weeks, declined again to 24·0 during the week ending Sept. 23rd. During the past twelve weeks of the current quarter the death-rate in the city has averaged 26·5 per 1000, against 20·6 in London and 17·9 in Edinburgh. The 161 deaths in Dublin during the week under notice showed a decline of 29 from the number in the previous week and included 31 which were referred to the principal zymotic diseases, against 36 and 43 in the preceding two weeks; of these 19 resulted from diarrhœa, 8 from "fever," 2 from whooping-cough, 1 from scarlet fever, 1 from diphtheria and not one either from small-pox or measles. These 31 deaths were equal to an annual rate of 4·6 per 1000, the zymotic death-rate during the same period being 3·6 in London and 4·1 in Edinburgh. The fatal cases of diarrhœa, which had been 21 and 26 in the preceding two weeks, declined to 19 last week. The deaths referred to different forms of "fever," which had increased from 3 to 14 in the preceding four weeks, declined again to 8 last week. The 2 fatal cases of whooping-cough corresponded with the number recorded in the preceding week. The 161 deaths registered in Dublin last week included 36 of infants under one year of age and 37 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from those recorded in the preceding week. Seven inquest cases and 3 deaths from violence were registered; and 42, or more than a fourth, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

SURGEON-CAPTAIN S. E. DUNCAN proceeds from Netley to York for duty in the North-Eastern Division. Surgeon-Captain Webb returned to duty in the Army Medical School, Netley, on the 20th inst. The following officers have embarked in the *Crocodile* for a tour of service in India: Surgeon-Major Dixon and Surgeon-Captains Mills and Stainstreet. Surgeon-Major Twiss has embarked for Malta in the same troopship on return from sick leave. The following officers have been granted leave to England from Gibraltar: Surgeon-Major Murray and Surgeon-Captain Davidson. Surgeon-Major Irvine has arrived in Gibraltar on return from leave and Surgeon-Captain Wright has embarked for India on return from leave. Surgeon-Captain Whiston, attached to the Egyptian Army, has left England to resume his duties on return from leave. The following officers have rejoined their several districts from leave of absence: Surgeon-Major Macgrath and Surgeon-Captain Hunter, Southern District; Surgeon-Major Adsetts, retired pay, Woolwich; Surgeon-Major Wolseley, North-Western District; Surgeon-Major Bedford and Surgeon-Lieutenant Johnson, Aldershot; Brigade-Surgeon-Lieutenant-Colonel Adye-Curran and Surgeon-Major Adcock, Dublin; and Surgeon-Major Swayne, Londonderry. Surgeon-Captain Walker has been retransferred to Cork, and the appointment of Brigade-Surgeon-Lieutenant-Colonel Greenhill, retired pay, to Lincoln has been notified.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Major Myles to the Medical Charge, Station Hospital, Neemuch; Surgeon-Major W. B. Browning, to be Additional Medical Officer, Ootacamund, without prejudice to his own duties as Surgeon to His Excellency the Governor; Surgeon-Captain W. Hallaran, M.B., A.M.S., doing duty Station Hospital, Bellary, to the Medical Charge of the Cantonment Hospital, Bellary, without prejudice to his other duties; Surgeon-Captain J. W. Cockerill, doing duty Station Hospital, Belgaum, to the Medical Charge of the Cantonment Hospital, Belgaum, without prejudice to his other duties; Surgeon-Lieutenant S. H. Burnett, on general duty, Sind District, to act as Civil Surgeon, Jacobabad, in addition to his own duties; Surgeon-Major D.C. Davidson to act as Civil Surgeon, Dharwar, during the absence of Surgeon-Major H. McCalman, M.D. Aberd.; and Surgeon-Captain J. Jackson, M.B., to act as Civil Surgeon, Satara, in addition to his own duties. The following postings are notified: Surgeon-Captains L. Way and E. O. Wight, on return from England, to do duty Secunderabad District; Surgeon G. M. Dobson, M.B., doing duty Mandalay District, to do duty Belgaum and Bangalore Districts; Surgeon-Captain J. E. Donegan, doing duty Belgaum and Bangalore Districts, to the Medical Charge, Station Hospital, Malapuram; and Surgeon-Captain G. H. Young, Medical Charge, Station Hospital, Malapuram, to do duty Mandalay District. Surgeon-Captain H. Herbert has delivered over charge of the Kaira District Gaol. Surgeon-Lieutenant-Colonel S. M. Salaman and Surgeon-Captain H. Herbert have respectively delivered over and received charge of the Yerroda Central Gaol. Surgeon-Lieutenant-Colonel J. A. Howell has delivered over charge of the Karwar District Gaol. The undermentioned officers of the Army Medical Staff, whose tour of foreign service will expire during the trooping season 1893-94, will proceed to England by the troopships leaving Bombay on or about the dates specified against their names: Surgeon-Captain H. M. Adamson, Oct. 12th, 1893; Surgeon-Captain R. E. Kelly, Jan. 2nd, 1894; Surgeon-Captain J. E. Donegan, Jan. 2nd, 1894; Surgeon-Major A. Asbury, Jan. 20th, 1894; Surgeon-Captain J. Donaldson, Jan. 20th, 1894; and Surgeon-Captain W. Hallaran, M.B., April 5th, 1894. The undermentioned officers, having been nominated to return to England from India, will be detailed by the P.M.O. in India for duty with troops on the homeward voyages during the trooping season of 1893-94: Brigade-Surgeon-Lieutenant-Colonels C. White, T. O'Reilly and T. J. P. Holmes, M.B.; Surgeon-Lieutenant-Colonel W. J. Fawcett, M.B.; Surgeon-Majors L. B. Ward, J. Powell, E. O. Reynolds, J. Stevenson, M.B., and R. Porter, M.B.; Surgeon-Captains M. W. Russell, C. A. Lane, M.B., J. G. Black, M.D., J. Fayrer, M.B., D. M. Sunders, M.D., H. A. Cummins, M.D., G. Bent, G. H. Barefoot, F. R. Newland, M.B., E. S. Marder, C. W. Allport, M.D., J. J. Russell, M.B., J. S. Edye, A. L. F. Bate, W. J. Trotter, and T. Du B. Whaite, M.B. The Queen's approval of the following Admissions to Her Majesty's Indian Medical Service appears in the *London Gazette* of Sept. 26th: To be Surgeon-Lieutenants (dated July 29th, 1893): *Bengal*: Cecil Robert Stevens, Cecil Charles Stuart Barry, Leonard Rogers, Ernest Alan Robert Newman, Gordon Travers Birdwood, Jay Gould, Reginald Geo. Turner, James Davidson and John Mulvany. *Madras*: Hugh Leslie Sutherland, Eric Harding Sharman, Thomas Stodart, Bhola Nauth and Thomas Howard Foulkes. *Bombay*: Patrick Percy Kilkelly.

NAVAL MEDICAL SERVICE.

Staff-Surgeons John Wilson, M.A., M.D. Q.U.I., and Robert William Williams have been promoted to the rank of Fleet-Surgeons in Her Majesty's Fleet. The following appointments have been announced:—Surgeons: Frederick W. Stericker to the *Royal Arthur*, Cornelius Bradley to Plymouth Hospital, and William Hackett, M.D., to the *Vernon*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Richard A. S. Daly to be Surgeon-Major;

Surgeon-Captain Charles E. Abbott, 2nd Volunteer Battalion, the Essex Regiment, to be Surgeon-Major; and Surgeon-Lieutenant William K. Bullmore, M.D., 1st Cornwall Volunteer Artillery, to be Surgeon-Captain.

YEOMANRY CAVALRY.

West Somerset: Surgeon-Major S. Farrant to be Surgeon-Lieutenant-Colonel.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Lincolnshire Regiment: Surgeon-Lieutenant L. W. Andrews, M.A., resigns his commission.—4th Volunteer Battalion, the Devonshire Regiment: Surgeon-Lieutenant C. E. R. Rendle is appointed Lieutenant.

OUTBREAK OF TYPHOID FEVER AT JHANSI.

The Indian papers report an outbreak of enteric fever in the Wiltshire Regiment, stationed at Jhansi. There were twenty cases in hospital and two deaths had occurred.

PHYSICIAN TO THE VICEROY.

Surgeon-Colonel R. Harvey acts as physician to the Viceroy of India during the absence of Surgeon-Major Fenn with Sir M. Durand's Mission to Cabul.

NETLEY MEDICAL SCHOOL.

The winter session of the Army Medical School will commence to-day (Saturday). The first systematic lecture will be delivered on Monday, Oct. 2nd, at 12.30 P.M., by Professor J. Lane Notter, M.D. Twelve Surgeons on probation for the Army Medical Staff and twelve Surgeons on probation for the Indian Medical Service will attend the course of instruction.

WIDOWS' PENSIONS.

Our contemporary, the *Indian Medical Gazette*, calls attention to the fact that officers of the Indian Medical Service are entitled to a pension for their widows under the provisions of the Royal Warrant in addition to any pension which they may obtain from the Indian Service Family Pension Fund and refers to the clauses to that effect contained in an official memorandum regarding the position of medical officers of Her Majesty's Indian Forces. From the particulars of a case which is given it would appear that this privilege is not generally known.

ANTI-CHOLERAIC INOCULATION.

M. Haffkine continues his inoculations in India. He recently operated upon about 500 individuals at Abbottabad, mostly native soldiers of the regiments stationed there. But the *Indian Medical Gazette* calls attention to a statement in a recent number of Koch's *Zeitschrift für Hygiene Sobernheim* to the effect that anti-choleraic vaccination according to Haffkine's method does not protect animals against cultivations of comma bacilli given by the mouth with Koch's precautions.

THE HEMP DRUGS COMMISSION.

The members of the Commission are actively engaged in collecting evidence as to the effects of these drugs and have visited the North-West Provinces and Jubbulpore. They have already been to the lunatic asylums of Benares, Lucknow and Bareilly to investigate the cases alleged to be connected with the use of these drugs and have issued a series of questions for witnesses who have been selected or have volunteered to give evidence. In addition to securing the opinion of European medical officers the evidence of medical experts and native practitioners will be taken. The Commission quotes Dr. Prain's report as the most recent work on Ganja.

HOSPITAL SATURDAY AT BRIGHTON.—The efforts on behalf of this fund at Brighton last week have been rewarded by a handsome result. In spite of the unpleasant weather that prevailed on Saturday the total of £1033 10*s.* 7*d.* is announced as having been received, and there are yet one or two more collecting sheets to be returned.

PRESENTATION.—Last week, at the Buckingham Oddfellows' Hall, after the usual business of the Lodge had been transacted, the members remained to testify their appreciation of the valuable services rendered to them by Mr. Edward Linnell, L.S.A., who for seven years had acted as assistant to Mr. H. De'Ath, the surgeon of the Lodge. The esteem felt by its members was expressed by the presentation to Mr. Linnell of an illuminated address in which his medical services were warmly acknowledged.

Correspondence.

"Audi alteram partem."

WHAT IS THE CRITERION OF CHOLERA?

To the Editors of THE LANCET.

SIRS,—Your sapient editorial comments upon the cholera question must arrest the attention of all who are in any way responsible for the public health in the ordeal to which the sanitation of our country, and especially of our ports, is now being subjected. It would be satisfactory indeed if the invasion of the germ theory into the science of medicine which has taken place since the last invasion of England by cholera had placed within our reach a criterion of the presence or absence of that disease in any particular case of suspicious diarrhœa which would be conclusive, unambiguous and readily applicable. Can any such criterion be postulated in the present state of our knowledge? We read of bacteriological and other investigations in particular cases and of authoritative pronouncements based upon such investigations. What weight is to be attached to them? Is Koch's comma bacillus the *vera causa* of Asiatic cholera or not? Can a sanitary authority, a county council, or a minister rest assured that bacteriological diagnosis is all-sufficient to decide the momentous question whether a rapidly fatal diarrhœa is of that specific class which shall set in motion official machinery and agitate the public mind, or of such a nature as to be dismissed from consideration as of no more municipal or national importance than an overdose of Epsom salts or the ingestion of unripe apples? You advise your readers to study cholera as a part of natural history, and probably the advice was never more needed than at present. The delightful *naïveté* and glibness of bacterial diagnosis tend to push aside the more tedious and duller pursuit of the genesis of specific disease. To see your materies morbi in a test-tube, safely corked with sterilised cotton wool, luxuriating in a stab-culture on pellucid gelatine is sufficiently fascinating, to say nothing of attenuated cultures and protective inoculations which follow as a matter of course. Pettenkofer's subsoil water, Glaisher's blue mist, Snow's Broad-street pump and even Hallier's mould-spores cannot compare with bacteriological triumphs in their completeness or their *fin de siècle* finality.

I remember being present at a debate on cholera at the Royal Medical and Chirurgical Society in 1885, and I was struck with the ability and alacrity with which one of our best-known bacteriologists in this country attacked Koch and his comma bacillus. He observed that "the bodies of patients suffering from cholera do not contain organisms which could be regarded as specific and pathogenic; the evacuations of cholera were harmless; the virus of cholera was not present in nor dependent on the dejecta of cholera; the bacilli can have nothing to do with the cause of cholera; he had injected syringefuls of the comma bacilli into the jugular vein, the intestines, under the skin and into the peritoneum of rodents, cats, dogs and monkeys with purely negative results." All these statements may be as positively true to-day as they may have been in 1885; but if so it is cold comfort to sanitary authorities and medical officers of health who are looking to the comma bacillus as the *fons et origo mali* and hunting for it in the evacuations and the intestines of the sick with all the assurance of scientific philanthropy. Even the Hamburg epidemic of last year appears to have left it open in the minds of German authorities as to what part, if any, evacuations of cholera-stricken patients play in spreading the disease, whilst Pettenkofer, Emmerich and Klein are said to have eaten Koch's comma bacillus with impunity. A few years ago there were wags who said that the finding of the comma in the colon had put a full stop to further inquiry. It seems that such is not the case and that environment, individual predisposition and chemico-physical conditions have most important relations to the origin and propagation of cholera.

Although we may not yet have isolated the *causa causans*, yet every cholera invasion leaves some lessons behind. No one who was in Hamburg about the beginning of last year's epidemic could have failed to have been struck with its general filthiness, its water-logged basements, its dirty water; it had many of the physical features which Indian writers have graphically described in cholera-stricken towns of the East. It has been shrewdly observed that "it is a principle

exemplified in all importation of disease from remote sources that the conditions which favour diffusion abroad are approximately the same amidst which the infection had been originally engendered." In view of the present fashion I believe it is physiological heresy to hint at a *de novo* origin of aught else than the primordial unicellular organism which is idolised as the mother of us all; and if the cause of cholera be particulate, bacteriology will deny to the disease origin other than from a pre-existent case. Still it is none the less true that predisposition, both communal and individual, would appear to be at least as important in determining attack as the presence of the virus itself. You say: "Life assurances are but little affected by cholera; the class of people who assure their lives do not commonly die of the disease, and if we could only place the poorer classes of the population in the same position as those who effect life assurances they would probably obtain a similar immunity." In this, as in so many public health questions, a solution appears to offer itself by way of social reform. It is the old question of Dives and Lazarus, and if the latter's approaches upon higher grounds are repulsed he can yet retaliate by contagion and infection. Means directed against bacilli—quarantine, notification and protective inoculations—may be good, but sanitary reforms which shall make the soil safe against invasion by raising the standard of comfort and the standard of health are better.

I am, Sirs, yours faithfully,

Eastbourne, Sept. 23rd, 1893. W. J. COLLINS.

THE OVERCROWDING OF THE PROFESSION AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—If our minds had not been dulled by reading week after week editorial articles and letters in the medical press calling attention to the various forms of unqualified practice and quackery, we might be surprised that there should be any need for such a letter as that of Dr. Bateman on unqualified assistants, which appeared in THE LANCET of Sept. 16th. An eminent statesman has recently preached the doctrine of "pegging away." It is eminently necessary to peg away at this question if the existing abuses are to be remedied. The General Medical Council deserves the gratitude and respect of all for its endeavours to raise the standard of education, but it has not yet succeeded in protecting the public and the profession against half-educated men and downright impostors. This latter function is, after all, the primary object of its existence. At the present moment a person has only to refrain from qualifying himself and he can snap his fingers at the authorities. The Society of Apothecaries is the only institution, except the coroner's jury, to act as a practical safeguard to protect public and professional interests. The famous "infamous" clause can only be used on rare occasions and is useless against the real offenders outside the profession. Half a century ago the Incorporated Law Society set us an example which it is not to our credit as business men to have neglected so long. Why has the General Medical Council refrained from any attempt to have the law amended? Germany, France and other countries are far in advance of us in the laws regulating medical practice. The apparent hopelessness of influencing this Council probably prevents men from troubling themselves in the matter or the columns of THE LANCET would be invaded from all quarters.

It is easy to realise that the question of amending the law in the desired direction is a complicated one and far-reaching in its effects, but this is no reason for not making an attempt to solve the difficulty. Statistics referring to unqualified practitioners, quacks and others are unfortunately not easily available, but sufficient data could be obtained to make a case for the consideration of the Legislature. It is perhaps of no concern to laymen to note the pecuniary losses to the members of the profession, though our poorer and younger colleagues may justly consider matters from this point of view. It may assist members of the General Medical Council to realise the gravity of the pecuniary issues at stake by illustrating the question by reference to pounds sterling. In the absence of statistics it may not be an exaggeration to assume that in the United Kingdom there are as many as 250 unqualified men in practice as professional unqualified assistants and it may not be unreasonable to assume that they on the average earn for their principals, directly or indirectly, as much as £200 a year. (I am not including in these figures the large sums in the aggregate earned by pupil assistants.) Multiplying these figures together, one arrives at the good round sum of £50,000 annually lost to the members of the profession. This does not include the large sums diverted from the pockets of highly educated and legally qualified men by other unqualified persons—quacks, bone-setters, prescribing chemists, *et hoc genus omne*. The sum of £50,000 capitalised represents nearly £1,700,000 at 3 per cent. interest. Surely this £1,700,000 is a question worthy of the attention of the General Medical Council. To men struggling for mere bread-and-butter the minor details of education pale into insignificance when the matter is looked at in this light. We should not hear so much of "sixpenny doctors" and medical aid associations and other undignified struggles for existence if the General Medical Council fulfilled the objects of its existence more completely. I would suggest that a limit should be set to the time a man might act as an "unqualified assistant." It would not interfere with the system of apprenticeship to a general practitioner if it were made illegal to act in any way as an unqualified assistant (say) five or six years after registration as a medical student unless by special consent of the Council.

This correspondence will not have been in vain if it induces even one member of the most powerful and influential body in the profession to ponder over these things and to realise the meaning of at least £50,000 a year divided amongst his younger and poorer colleagues who have honestly and industriously earned their positions in accordance with the law of the land. Is it too much to hope that this important subject may be referred to a business-like committee at the next meeting of the General Medical Council?

I am, Sirs, yours faithfully,

Margate, Sept. 16th, 1893. BERTRAM THORNTON.

THE LATE CHARLES CLAY OF MANCHESTER.

To the Editors of THE LANCET.

SIRS,—In your brief notice in THE LANCET of Sept. 23rd of the career of the late Mr. Charles Clay it is stated that "he regarded himself as being the originator of operation by the 'large incision'" and that "his claim to be considered the 'Father of Ovariotomy' in England seems to be well founded." In the sense of Paley, that "he alone discovers who proves," he is largely entitled to this distinction. It would be out of place to trace minutely the history of ovariotomy. It was suggested by William Hunter; its practicability and the mode of performing it were taught by John Bell; and it was first practised, and that successfully, by an American—viz., Dr. McDowell, a pupil of John Bell. Mr. Clay's first operation was done in 1842, but I believe it had been done before this date in London. When a pupil and demonstrator of anatomy to the late Samuel Lane I remember that he performed the operation. This was earlier than 1842 One tumour removed by him was preserved in the museum at Grosvenor-place. Probably it was removed to St. Mary's Hospital when he took his museum there. Of course it would be superfluous at the present day to preserve ordinary specimens of this kind; but this particular tumour, being one of the first—if not the first—example of a new operation, would possess exceptional historical as well as scientific value. This was not Samuel Lane's only case. He regarded the operation as a great gain to surgery. If he did not often repeat it, it was because he could not bring himself to cultivate any branch of the art that might lead him into specialism. This characteristic of the man was strikingly shown in his refusal to continue the splendid course of lectures on syphilis which were begun in THE LANCET about the same time. He was a surgeon in the noblest sense. He did not work for fame or for money.

I am, Sirs, yours faithfully,

Lyss, Sept. 23rd, 1893. ROBERT BARNES.

SURGERY OF THE AIR PASSAGES IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—Permit me to make a few remarks on the second instalment in THE LANCET of Sept. 16th of the excellent address by Mr. Bernard Pitts on the Surgery of the Air Passages in Children. I observe that the lecturer refers to the presence of adenoid vegetations as a not infrequently associated condition of difficult respiration in children and

he makes some distinction between varieties of crowing inspiration in the young, although these distinctions are not recognised by other writers—Dr. Goodhart, for example—who includes the condition of excessively curved epiglottis, first noted by Dr. Lees, as an etiological factor in ordinary convulsive laryngismus. But, treating all these cases generically, neither in the case quoted by Dr. Lees nor in any other of the few instances in which a post-mortem examination has been made on a case of laryngismus is there to be found a note of the condition of the naso-pharynx; nor in any manual on Diseases of Children is hypertrophy of the pharyngeal tonsil noted as an etiological factor of laryngeal spasm. I may therefore be excused for referring to the fact that in the early part of 1890[1] I expressed "a tolerably sure conviction that, in almost every case of laryngismus, as well as in those of tetany and convulsions, the subject would be found to be a mouth breather, and that, if sought for, adenoid growths would always be discovered."

The writer of a leading article on this subject[2] declined to subscribe to this opinion, but further personal experience, as well as recorded cases by other competent observers—Mr. Kendal Franks for one—have confirmed me in my view, and now that it is suggested independently by such an authority as Mr. Bernard Pitts I doubt not that it will receive increased attention. I do not venture to trouble you at length with the *rationale* of this view, though the line of reasoning from nasal obstruction and consequent mouth breathing, with abrogation of the special respiratory functions of the nose, to laryngeal hyperæmia and irritation, is neither intricate nor difficult of comprehension. I would contend that all other examples of laryngeal irritation in children, of which "barking cough," whether of puberty or of earlier age, is one, may be explained and treated on the same lines. Also that nasal obstruction is a powerful predisposing factor of the throat symptoms of diphtheria, scarlet fever &c., as well as of whooping-cough, and that when existent it greatly intensifies the severity of an attack. Indeed, to revert to laryngismus for a moment, has anyone seen more than a small proportion of cases of rickets—an acknowledged powerful predisponent to child-crowing—in which adenoids have not coexisted?

Finally, I ask permission to note that I have reported two cases which would justify the view that the presence of adenoid vegetations leading to mouth breathing may be a causative factor of papillomata in young children. In each of these cases recurrence was persistent, but was promptly arrested after clearance of the naso-pharyngeal vault from glandular overgrowths.

I am, Sirs, yours faithfully,

Sept. 19th, 1893. LENNOX BROWNE.

P.S.—I do not observe that Mr. Bernard Pitts has drawn attention to an observation in my case of congenital papilloma quoted by him that tracheotomy was promptly followed by fatal hæmorrhage, which was apparently due to a sudden pulmonary apoplexy of lungs never previously fully inflated in consequence of the glottic obstruction.

INTERNATIONAL MEDICAL CONGRESS.

To the Editors of THE LANCET.

SIRS,—I am glad to see in the last issue of THE LANCET that your Rome correspondent is emphasising the inconvenience of the International Medical Congress meeting in Rome in April next. I was in Rome last Monday week, and had the opportunity of talking the matter over with one of the leading hotel proprietors there, who informed me that thirty of the principal hotel proprietors at his suggestion had signed a petition to the Comitato Centrale, urging them to postpone the gathering until May. He informed me that it was by no means improbable that if strong pressure were brought to bear upon the Comitato from England and elsewhere this postponement might be carried out. As I had a rather exceptional experience in arranging for a large party in Rome last April, perhaps you will permit me to emphasise in your columns the extreme inconvenience of having the gathering at this date. There is no month in the year when Rome is more crowded than in April, and to hold a congress of this kind at that date will lead to an amount of inconvenience which only those who have visited Rome in any considerably large party in April will have any idea of. Last year, by carefully arranging beforehand, I was able to secure accommodation for 150 people at once, but had there been another hundred in my party it would have been an absolute impossibility to have obtained comfortable rooms for them. These arrangements were made in January. What then will happen when ten times as many visitors as the number of my party are added to the regular influx of visitors at this special season of the year? In May the circumstances are entirely different, and there would be abundant first-class accommodation available for all who might wish to attend. I shall be very glad if by publishing this letter you will help to strengthen the hands of those who are endeavouring to secure a further postponement of the Congress.

I am, Sirs, yours truly,

Sept. 23rd, 1893. HENRY S. LUNN.

[1] Brit. Med. Jour., vol. i. 1890, p. 357.
[2] Ibid., p. 729.

THYROID EXTRACT AND ITS EFFECTS.

To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET you call attention to Dr. Anson's remark in the *New Zealand Medical Journal* that no effects follow the taking of thyroid extract unless myxœdema be present, and that Dr. Anson had himself taken the juice with impunity. You further remark that similar statements were made regarding tuberculin, which however have not invariably held good. What has been found in the case of tuberculin is without doubt equally so in that of the thyroid extract. Cases have been published in which changes have been brought about in the skin of persons who are the subjects of psoriasis, ichthyosis and chronic eczema,[1] and some benefit has been said to follow its use in cases of obstinate anæmia.[2] In these cases there was no sign of myxœdema. In simple obesity it has been used with the results that the body weight greatly diminished.[3] When taken by the healthy adult it is frequently followed by severe occipital headache, with increase of the pulse-rate and sleeplessness. I have known several such cases. Dr. A. Maude suggests, from the effects of the extract on himself, that the occipital headache may be due to the distension of the torcular and sinuses at the back of the skull.

I am, Sirs, yours faithfully,

Colney Hatch Asylum, Sept. 25th, 1893. CECIL F. BEADLES.

"THE REPORT OF THE SELECT COMMITTEE ON MIDWIVES' REGISTRATION."

To the Editors of THE LANCET.

SIRS,—After your able annotation regarding Dr. Rentoul's charges in THE LANCET of Sept. 23rd (for which I thank you) I feel that I might safely leave them to the verdict of the profession. There are, however, one or two points for which I would crave a little space. The word "alleged" I used advisedly, as I expected that sooner or later Dr. Rentoul would repudiate the newspaper statement. He forgets that the latter was published broadcast in Liverpool, that my attention was directed to it by the workhouse committee, and that I had to defend myself against it in my letter to them. Dr. Rentoul had two clear days in which to correct the newspaper statement if it misrepresented him. I have not yet seen the Blue-book, but I note Dr. Rentoul's version of his statement in his letter and your version of the same statement in the annotation, and I ask the readers of THE LANCET to compare them with each other and with the Blue-book and with my opinion of Dr. Rentoul's statements generally in the prefix to my letter to the committee. For the present I will assume Dr. Rentoul's version to be correct, as the form of the words is admitted by him, although I think that no essential difference will be found to exist between the newspaper statement and the report of the Commission. He said: "In one hospital with which I was connected we had a very small puerperal death-rate, but we managed that by removing all the women that we thought were going to die from the puerperal wards into the medical wards, consequently we were able to certify that during the year not one lying-in woman had died in the maternity wards." Now the lying-in register is *not* "a local register of mine," but the official lying-in register of the workhouse and of the

[1] Drs. Byrom Bramwell and Arthur Davies, Brit. Med. Jour., Aug. 26th, 1893.
[2] Dr. E. Duke, Birmingham Medical Review, August, 1893.
[3] Dr. Putnam, American Journal of the Medical Sciences, August, 1893.

Local Government Board, the book to which all officials refer if they want reliable information ready to hand. It contains detailed statements of what happened to every patient who entered the ward, and it can be checked by the general register in the governor's office, where every inmate can be traced and where all her movements through the house are notified from the day she entered the workhouse until her exit, dead or alive. In February every year I tabulate the results of the lying-in wards for the previous year, notifying especially the particulars of all the maternal deaths, no matter where or from what cause they occurred. This tabular statement is signed by me, initialed by the chairman of committee, and is a public document to be used by the vestry or the Local Government Board or by Dr. Rentoul, as he used it in a previous letter. Does Dr. Rentoul impugn the accuracy of this book or the annual official statement? The ordinary death certificates are filled up by the resident staff. In these all deaths are certified to have occurred in the workhouse, the division of the workhouse where they died never being specified. I do not know of any other certificates, and I would like to know in clear and straightforward language what Dr. Rentoul means when he says that "consequently we were able to certify that during the year not one lying-in woman had died in the maternity wards." When was he or any other person required to certify to that effect? I know of no such certificates nor has the occasion ever arisen, to my knowledge, when any of the medical officers had ever to give such a certificate.

The fact that we have isolated puerperal cases is true—a common procedure that seems to have strangely exercised Dr. Rentoul—and even now my admission of the fact seems to him to prove all things. The superstructure founded by him on that fact is a hideous creature entirely of his own imagination. Just a word in regard to the death certificates under discussion. Dr. Rentoul quotes the following words from a report of the Registrar-General: "At the same time, it must be admitted, childbirth mortality is in all probability very much understated in our official returns, the fact of parturition being often unjustifiably omitted and the secondary cause of death alone stated in the medical certificate." I think I proved in the two cases referred to that the fact of parturition might be considered as justifiably omitted (although I really do not actually know why the certifiers omitted it), and surely even Dr. Rentoul would not dare to say that in these cases the primary cause of death was not stated in the certificate.

Dr. Rentoul again says: "I hold it is the duty of every person who prizes the accuracy of mortality statistics to obey these suggestions." It is an amusing instance of the difference between a critic and a practitioner that during the time that Dr. Rentoul was locum tenens at the Workhouse Hospital he certified three deaths as occurring from "hydroperitoneum" and three from "dropsy," in spite of No. 3 of the "important suggestions of the Registrar-General." The Registrar-General wants the certificates to be accurate, and I maintain that the two certificates objected to by Dr. Rentoul are perfectly accurate according to the true spirit and intent of registration of mortality. I may say, in conclusion, that Dr. Rentoul need not trouble himself to look for proof that no death has occurred in the lying-in ward. We do not intend to have any deaths there, for obvious reasons, if we can help it. But the isolation ward is the only ward above the lying-in ward in the same building, and practically the patients are still on the lying-in list, and on the "page" at the head of the bed of each patient is written "From the Lying-in." For convenience of isolation this ward is better classified as another division and for no other reasons.

I am, Sirs, yours truly,

Sept. 25th, 1893. WM. ALEXANDER.

P.S.—I have purposely refrained from entering upon any of the general questions raised in this discussion, restricting myself entirely to defending myself and the hospital from the unfounded charges made by Dr. Rentoul.—W. A.

To the Editors of THE LANCET.

SIRS,—I will only venture to trouble you with a few cases in reply to Mr. Sers' and Dr. Drage's letters on the above subject. Mr. Sers states that the bulk of midwifery is in the hands of medical men. This is contrary to the evidence, which shows that only about 40 per cent. of all confinements are in their hands. The puerperal death-rate depends mostly on septic causes, as Dr. Robert Boxall has shown; and, since all medical men know something of antiseptics, it follows that, though by mischance they may cause isolated cases now and then, they will not spread puerperal fever to any extent. Dr. Williams of Cardiff clearly showed in his evidence that it was widely spread by untrained midwives through their ignorance of elementary antiseptics. The latter, therefore, must be the chief agents in causing the death-rate. Mr. Sers practically advocates the formation of a partially educated, wholly uncontrolled class, forgetting that every other branch of medicine is under special laws and restraints. It was a pity that the Select Committee did not have the benefit of Mr. Sers' experience with town and country midwives. Dr. Drage has been good enough to criticise my letter. I should have thought it was almost unnecessary to point out to a medical man the annoyance the members of the profession suffer in attending ordinary confinements, the proof of it, if such were required, lying in the fact that they cease to attend such cases as soon as they possibly can except for a very remunerative fee. The main justification for our attending such cases lies in the fears of the patient; but this is discounted both by the lassitude with which our really important cases of disease are attended next day, as well as by the risk we run in attending infectious cases when much fatigued. I take no note of the innumerable unnecessary calls we get to such cases. As to the scientific aspect of the work, that applies equally to all the other normal or abnormal processes of the body and is apart from the question. Dr. Drage forgets that prevention of disease is usually a very much simpler and more agreeable task (to the patient) than the treatment of it when once it has come, and that a person who has little knowledge herself, but who follows the rules given her by those who do know would be very successful in the former, where she would fail lamentably in the latter. Dr. Drage asks if I can explain why in Germany, with trained and controlled midwives, puerperal fever and the death-rate is so high? The explanation lies in the fact that tradition there governs the management of the lying-in to such an extent and is so opposed to sanitation that the skill and science brought to bear upon the patient are only partially able to cope with the dangers she is subjected to. I am, Sirs, yours truly,

F. ROWLAND HUMPHREYS.

Fellows-road, South Hampstead, N.W., Sept 25th, 1893.

To the Editors of THE LANCET.

SIRS,—In your annotation on this subject, which appears in the last issue of THE LANCET, you pay me the honour of referring to my letter, and in the annotation you put a very reasonable question, which I feel bound to answer. I have stated more than once, and I repeat the statement, that there are any number of medical men who attend midwifery at the rate of uncertificated midwives, and you ask, "What does 'any number' mean?" adding, at the same time, "Will Mr. Sers give a definition of it or tell us of any limited place where the statement can be tested?" and you, moreover, infer that my statements reflect, directly or indirectly, on the "dignity of the profession." With regard to the definition of "any number," I do not think I could be more explicit than by asking to be allowed to suppose that I am asked a question—say, for instance, whether it is possible to procure at such and such a village any particular article of commerce, I will suppose I answer the interrogator, "Any number." By this I should mean, technically speaking, an indefinite number and practically *quantum sufficit*. In precisely a similar sense I apply "any number" to the public requirements—i.e., that there are a sufficient number of medical men who work at low fees and thus meet the exigencies of the case in question—i.e., the requirements of the working class. Secondly, with regard to my specifying any particular place in which the accuracy of my statement could be tested, I venture to state that in my own locality any poor person would have no difficulty whatever in procuring the services of a male accoucheur for the modest fee of 10*s.* 6*d.*, and any gentleman who likes to call upon me to test it I will accompany arm-in-arm to more than one spot, and I promise not to fatigue him either. I may mention, moreover, that I assisted my brother in a country practice several years ago—a practice which he inherited from a medical man since deceased, who held it for many years and whose ancestors held it before him—and that 10*s.* 6*d.* was the fee charged amongst the agricultural classes, and I may in addition state that, although I am half ashamed to do so, within recent years another practitioner started in the same neigh-

bourhood and offered himself at 5*s*. I was also told a few days ago by a gentleman of high standing in the profession that at Woolwich medical men were charging as low as a 7*s*. 6*d*. midwifery fee. Thirdly, with regard to the "dignity of the profession," I willingly withdraw or modify as far as possible any statements on this score, but I am bound to say personally that I am one of those who are not at all squeamish in charging low fees in necessitous cases, as no dignity will get blood out of a stone. Nor do I make any secret thereof, and if a person chooses to accept 10*s*. 6*d*. as a midwifery fee from one who cannot afford more I care not two straws whether it flows into his pocket through the tortuous channels of an intricate Poor-law system, or whether he takes it directly from the individual: the fee is the same, the office he performs for such fee is the same, and the dignity or indignity of accepting such fee are, to my mind, coequal, and the plea of humanity—provided this term is not used in any canting sense, as it sometimes is, to cover intrigue or to conceal invidious conditions—will suffice to protect the cloth of our profession, insomuch that such a one need not be ashamed of it and the profession in such case need not be ashamed of him.

In conclusion, Sirs, I thank you very much for your extraordinary indulgence. I would not under ordinary circumstances presume to follow suit upon the heels of a parliamentary committee. No doubt they have conducted their inquiry with ability and of course with perfect honesty of purpose, but they have had to perform their work under a most oppressive atmosphere. Their court has been literally deluged and saturated with irrelevant jargon, as the Blue-book which I possess clearly shows. Had the loquacious witnesses only been sternly repressed, asked questions and their attention demanded to the answers, but no opinion taken, and had the Committee kept their attention rivetted on the true and broad questions at issue—that is to say, in the first place, whether it is desirable to risk an excessive decrease of midwives, which, in reality, means an abrupt interference with a very complex state of society, and, in the second place, whether it is desirable to risk an excessive increase, and, above all, as to the practicability or, rather, utter impracticability of the whole scheme—the verdict would have been to my way of thinking a verdict adverse to the promoter's pretensions.

I am, Sirs, yours truly,

Queen's-road, Peckham, Sept. 23rd, 1893. CLEMENT H. SEES.

THE ORIGIN OF CHOLERA.

To the Editors of THE LANCET.

SIRS,—*A propos* of the cases of cholera in Westminster and on board the tug-boat *Eagle* at Gravesend, in neither of which there appears to have been any source of infection of Asiatic cholera discovered, I would venture to make a few remarks. Are we not, in seeking to exclude cholera by elaborate and expensive precautions, rather shutting our eyes to the fact—for fact it is—that cholera or cholera germs are, and ever have been, in certain favourable localities, always with us? This applies not only to India, the supposed *fons et origo* of cholera and where heat and insanitary conditions are perennially favourable to its development, but also to Europe and to England; it is, in fact, everywhere endemic until circumstances render it epidemic. I do not contend that cholera cases should not be if possible excluded, or that they should not be isolated and properly treated when they do gain an entrance, as they infallibly will; but I do say, and say emphatically, that were they excluded ever so rigorously cholera would nevertheless (under favourable circumstances and in spite of all external precautions) raise its hydra head from time to time in our very midst. In certain localities the germs of cholera ever lurk unseen, but ready at any moment (under the necessary conditions of heat, moisture &c.) to burst into life and malign activity. This is why cholera breaks out again and again in the self-same places, sparing, with apparent caprice, others in the immediate neighbourhood—even attacking sometimes only one side of a street. As certain conditions of soil, temperature, drought or rainfall are necessary for the germination and growth of plants, so are they equally needful for the existence and multiplication of certain microscopic spores and microbes. We all know how, when soil has been recently upturned, it may become rapidly covered with some luxuriant vegetable growth which has not appeared on its surface for, who can say, how many years, but the seeds of which have lain dormant in the earth awaiting only the conditions necessary for their growth. Nothing can, to my mind, be more senseless and misleading than to make the diagnosis of cholera depend exclusively on the presence or absence of the comma bacillus in the discharges. That this bacillus is usually present in true Asiatic cholera may be readily conceded, but that it is the cause of the disease is most certainly unproven. That true cholera, whether Asiatic or sporadic, may exist without the presence of the comma bacillus no sensible observer can doubt; to deny that a case with all the characteristic symptoms of collapse, cramps, rice-water stools, cold breath and suppression of urine is cholera, simply because of the absence of the so-called distinctive bacillus is a bacteriological absurdity, which may produce the most disastrous consequences. I believe every case of autumnal diarrhœa to contain the possible germs of cholera, just as every case of sore-throat may have in it the possible germs of diphtheria; both should be considered "suspect," and both should be, during an epidemic, compulsorily notified. In this way only, by at once preventing its entrance and at the same time promptly attacking it on its very earliest appearance amongst us, can we succeed in vanquishing this dire disease.

I am, Sirs, yours truly,

CHAS. EGERTON FITZ-GERALD.

Folkestone, Sept. 17th, 1893.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Monday Evening Popular Lectures.

DURING the ensuing winter and spring another series of popular lectures, open to the public without fee, will be given at the Owens College, the experiment, which was tried for the first time during the winter session of 1892–93, having been so successful that the college authorities have decided to repeat it this year. The lectures will be delivered on Monday evenings at 8 P.M., the first lecture being fixed for Monday, Nov. 13th, by Mr. Leslie Stephen. Amongst the lectures to be delivered during the forthcoming season I notice several of scientific interest—for example, Professor Stirling will lecture on "Respiration," Professor Weiss on "The Sensitiveness of Plants," Professor Smithells (of the Yorkshire College) on "The Structure of Flame," and Professor Lodge (of University College, Liverpool) on "The Interstellar Æther." If one may judge by the experience of last year, a series of intellectual treats are in store for the studiously inclined amongst the Manchester public, whilst the lecturers may, on their part, rest assured that large and appreciative audiences await them.

The Ancoats Healthy Homes Society.

On Tuesday evening last the annual meeting of the friends and supporters of the "Ancoats Healthy Homes Society" was held in the Coöperative Hall, Oldham-road. This excellent society has now been in existence four years and, according to the testimony of persons who have special opportunities of judging, its usefulness has steadily increased and its sphere has been further extended during each successive year. During last winter twenty-three meetings were held in some of the poorest neighbourhoods in Manchester, the aggregate attendance amounting to just 20,000, and the average attendance at each meeting numbering 850. The committee of the society speak with hopefulness of the progress now being made by the city corporation in the erection of labourers' dwellings, but at the same time they think that a little more expedition might be shown in bringing the work to completion so that the people for whose benefit the dwellings were erected might have the advantage of inhabiting them before many more years have passed. The work of the committee of the society has been greatly aided by the action of the corporation in reducing to a nominal sum the cost of admission to the public baths in the district. The total expenditure of the society last year amounted to something under £64. Considering the number of entertainments given and the amount of steady and useful work done amongst the poor throughout the year, it would perhaps be difficult to find another society in England that does so much and such good work for so little money. The committee consists very largely of working men, and for this reason perhaps it is popular with the poor people who are the objects of the society's care.

The day would be a sad one for Ancoats which saw the dissolution of its Healthy Homes Society.

Revival of Prize-fighting: Serious Results.

Very discreditable proceedings were brought to light last week at the City Police-court in connexion with a prize-fight which had taken place a few days previously at a certain "club" in Manchester, the combatants being pitted against one another presumably for the delectation of the members of the club, who subscribed a handsome prize in money for the "best man" in the contest. In the course of the fight it appears that one of the combatants received a heavy blow on the side which completely disabled him, and he was promptly removed to the infirmary, where his condition was found to be so serious that his removal was objected to by the medical staff.

The Mersey and Irwell Joint Committee.

On Monday, the 18th inst., a very important meeting of this committee was held in Manchester to again consider the advisability of taking proceedings against a large batch of firms who are held to be polluters of one or other of the watercourses within the committee's jurisdiction. Sir Henry Roscoe, M.P., attended and reported the results of his examinations of the various effluents turned into the rivers. The committee made an order allowing twenty-four firms a period of three months within which satisfactory arrangements must be made for the purification of their respective effluents; in three cases a period of two months was allowed for the completion of the necessary works, and in nine cases a period of only one month was allowed in which the proprietors will be compelled to discontinue the pollution which they have been so long permitted to contribute to the aggregate foulness of the Irwell. It is fairly certain that on the expiration of the days of grace allowed by the committee in the several cases only a small proportion of the required works will be completed; it remains therefore to be seen how the defaulters will be dealt with at the beginning of the new year.

Sept. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Inspection of the Newcastle Cholera Hospital.

A DEPUTATION from the corporation of Dundee has visited the cholera hospital here and has expressed itself highly pleased with the hospital and its arrangements. At the same time the situation is open to objections, as that of an infectious diseases hospital very generally must be. No one wants such an institution in his vicinity; yet, if the building is placed too far away some of its utility may be lost. The Newcastle Cholera Hospital is, I fear, too far from the populous parts of the city. It is said that the nature of the cases at Byker has been verified by Dr. George Murray as Asiatic cholera.

Request to Practitioners.

Our medical officer of health has issued a request to practitioners to notify to him all cases of cholernic diarrhœa, which affection has lately been very prevalent both in Newcastle and Gateshead.

The late Heavy Mortality at Sunderland.

It has been explained that the late heavy mortality in Sunderland has been principally owing to the death-rate on the northern, or Monkwearmouth, side of the Wear, where it reached the enormous figure of 52·5 per 1000. A meeting has been held in Sunderland under influential auspices to form a fund for sending patients discharged from the Borough Fever Hospital to a convalescent home. The medical officer explained to the meeting that it was his duty to discharge patients from the hospital when they were free from infection, though he might be convinced that they were not yet fit to work.

Death of a Centenarian.

Our papers announce the death of Mrs. Moscrip at Boston Spa, at the great age of 104 years. The old lady's health was fairly good when she celebrated her 104th birthday last July. She was a native of Newtown near Berwick-on-Tweed, but removed about twenty years ago to her daughter's house at Boston Spa, where she died.

Medical Appointment.

Brigade-Surgeon-Major Collier, of the Army Medical Department, who has been stationed at Berwick for some years, has retired from active service and will leave the district on Oct. 1st; Surgeon-Captain H. H. Brown, from Madras, India, who did duty at Berwick about seven years ago, has been appointed to the vacancy.

Fever in the North.

At the last meeting of the Middlesbrough Sanatorium Committee Dr. Malcomson, the medical officer, stated that there were forty-four patients suffering from various forms of continued fever and also nine cases of small-pox from Middlesbrough and neighbourhood. He also read a special report on the outbreak and continuance of typhus fever at Grangetown. It appears that the disease was introduced by a tramp so far back as last January and is still spreading. In all there have been about thirty cases. At Darlington also an increase in infectious diseases has been reported to the sanitary authority.

Newcastle-on-Tyne, Sept. 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Cork North Infirmary.

THE new wards—"Combermere" and "Gibbings"—were recently opened. The cost of this addition to the infirmary was defrayed by a legacy left by the late Lady Combermere, daughter of Dr. Gibbings, who was formerly connected with the institution, but left Cork so far back as 1807. On Lady Combermere's death some three years since she bequeathed a sum of £28,000 to the North Infirmary, and this money has been expended in building the two wards referred to, improving the sanitary arrangements, and remodelling the hospital generally. A statue of Dr. Gibbings is to be placed on the landing of the first floor, and the Combermere Ward will contain a portrait of his daughter, Lady Combermere. Each ward contains eighteen beds.

Health of Dublin for 1892.

During the past year the births in the Dublin registration district numbered 9699, or 28 per 1000, the average rate for the preceding ten years being 29. The deaths amounted to 10,214, and omitting 280 deaths of persons admitted into public institutions from places outside the Dublin registration district, the death-rate was 28·4. Including these 280 deaths, the rate was 29·2, or 1·7 above the average. Of the 10,214 deaths no less than 3209, or 31·4 per cent., occurred in the various hospitals, workhouses, lunatic asylums and prisons. Zymotic diseases caused 1500 deaths, or 262 over the average yearly number in the previous ten years and 635 above the number in the year 1891, which had the lowest number up to that year. Ninety-one deaths took place from typhoid fever. Sir C. Cameron, the compiler of this report, points out that it is not a little singular that whilst zymotic diseases were as a class very rife in 1892 the mortality caused by typhoid fever should have fallen off as compared with previous years. The following facts derived from the mortality statistics of the population of Dublin prove the appalling high death-rate which prevails amongst the children of the working classes:—In 1892 the deaths in the families of the professional and independent classes numbered 400; of these 19 were of children under five years old. In the same year the deaths of persons belonging to the classes of porters, hawkers, labourers &c., and of members of their families, numbered 2953, of which 1429 were of children under five years of age. Typhoid fever, always of formidable dimensions in Dublin, was less prevalent in 1892—notwithstanding the unhealthy character of the year—than in the preceding years. Sir C. Cameron has strong reasons for believing this disease to be, in Dublin at least, of a miasmatic character. The water supplied to the city is of exceptionally good quality and there are practically no local wells in use the water of which might become contaminated; the condition of the street sewers is excellent and the house drainage has been greatly improved during the last ten years; yet typhoid fever exists in Dublin to a much greater extent than is the case in the great majority of British and Irish towns. No doubt the proposed main drainage scheme will

produce an improvement in this state of things, but it must not be forgotten that it does not provide for soil drainage.

Queen's College, Cork.

The annual report of the president shows that for the session 1892–93 the number of students attending the College was 243, 200 of whom were in the Faculty of Medicine. The deficiencies so often pointed out in the educational appliances of the College, especially in the departments of chemistry, natural philosophy and natural history, still exist. The library has long ceased to be adequate either for the number of students using it or for the quantity of books it is expected to contain. The Lord Lieutenant has given permission to acquire a piece of land which will prove to be a valuable addition to the botanic garden.

Downpatrick Lunatic Asylum.

Mr. M. J. Nolan, senior assistant officer in the Richmond Asylum and late acting resident superintendent Limerick District Asylum, has been appointed resident superintendent of the Downpatrick Asylum by their Excellencies the Lords Justices. The vacancy in Downpatrick Asylum has arisen through the death of Mr. Tyner at an advanced age.

The trustees of the Cork South Infirmary have issued an appeal for £1000 to defray the expenses of building new sanitary annexes and other necessary improvements now in course of construction. About £750 has already been acknowledged in response to the appeal.

The authorities of Sir P. Dun's hospital have threatened to reduce the number of their beds unless a sufficient response to their appeal for funds is received. Amongst the contributions are a sum of £100 from the Pembroke Commissioners and £200 from Lord Iveagh.

Sept. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Professor Germain Sée on Ulcer of the Stomach.

AT the last meeting of the Paris Academy of Medicine Professor Sée's views on the nature, diagnosis and treatment of gastric ulcer were listened to with much attention. He distinguishes three forms of stomach troubles—viz., 1. Hyperchlorhydria and "gastro-succorrhœa," which latter in nine cases out of ten is accompanied by the former. In this group he places ulcer of the stomach. 2 Abnormal fermentation, with or without generation of gases. This group includes *embarras gastrique* (acute gastric catarrh), chronic gastric catarrh, atrophy of the mucous membrane and cancer. 3. Nervo-motor dilatation without chemical complications. Of ulcers he distinguishes two varieties: the bleeding ulcer and the peptic ulcer without hæmorrhage. In the bleeding variety of ulcer the catheterism of the stomach with a view to analysing the contents for excess of acid must, of course, be conducted with great precautions. Hyperchlorhydria having been found, the treatment must be directed to removing this condition. Antacids, alkalines and especially the chlorides of the alkaline earths, calcium and strontium, are to be had recourse to, together with what Professor Sée denominates a *régime lacté carné albumineux*, which uses up the excess of the hydrochloric acid present. The dry diet so often prescribed for the dilatation so frequently accompanying ulcer is hurtful, inasmuch as it tends to concentrate the gastric juice. The diagnosis of the non-hæmorrhagic variety of gastric ulcer is frequently far from easy, liable as it is to be confounded with such conditions as simple dilatation, dyspepsia, biliary colic and chlorosis. The principal means of diagnosis lie in testing for hyperchlorhydria. Peptic ulcer differs from simple uncomplicated hyperchlorhydria by the presence of the characteristic paroxysmal hatchet pains (*douleurs en hache*) and of repeated and serious vomitings. Gastro-succorrhœa (Reichmann's disease), which is mostly complicated with hyperchlorhydria, may be recognised by the hypersecretion and the pains occurring after an interval of several hours after a meal, when the food has already passed through the stomach. Œsophageal varix—the result of cirrhosis of the liver or of senile or alcoholic degeneration of the vein coats—may be mistaken for the bleeding form of ulcer of the stomach. Hæmorrhage from cancer is generally not profuse and the blood is not decomposed. Œdema of the legs after fatigue is especially frequent in cancer, even at the beginning of the malady. This phenomenon is rare in ulcer.

Napoleon the First's Medical Advisers.

From a curious work by M. Maze-Sencier, entitled "Les Fournisseurs de Napoléon Ier," we glean a few details concerning the *petit corporal's* physicians, surgeons, chemists, dentists, corn-cutters &c., who cost him annually the sum of 201,700 francs. His chief physician (Corvisart) received 30,000 francs, *plus* 4500 francs for office expenses; Hallé, his physician-in-ordinary, received 15 000 francs; Lanfrancque, Guillouneau, Lerminier and Bayse, who took duty in turns at the Infirmerie Impériale, were each paid 8000 francs; four other practitioners, who acted as consulting physicians (Malet, La Pieux, Pinel and Aubry), received each a salary of 3000 francs; the chief surgeon (Boyer) was paid 15,000 francs and the surgeon-in-ordinary (Yvan) 12,000 francs. It was Yvan who dressed Napoleon's wound at Ratisbon in the year 1809, and his portrait appears in Gautherot's picture—now at Versailles—of the incident. The four surgeons of the Imperial Infirmary were Horeau, Vareillage, Lacouenère and Ribes, and the pay attached to their office was 6000 francs. Napoleon's surgeon at Saint Cloud, which he frequently inhabited, was Lassoujade, who received 4500 francs. Each of his consulting surgeons received 3000 francs; they were Pelletan, Percy, Sabatier and Dubois. It was Dubois who was in attendance on the Empress, Marie Louise, in her confinement. The process being long and laborious, he communicated his anxiety on the subject to the Emperor, whose reply was, "Faites comme si vous aviez affaire à une bourgeoise de la rue Saint-Denis; surtout, Dubois, sauvez la mère." The case did well, and the Emperor, delighted, told Corvisart to ask Dubois what reward he desired for his services. The latter, who was evidently a man of a practical turn of mind, gave the following modest reply: "Dis à l'empereur que je désire beaucoup d'honneurs et beaucoup d'argent." Let us hope that a *douceur* of 100,000 fr. and his elevation to the rank of Baron satisfied the cravings of the ambitious accoucheur for advancement. Napoleon had also his surgeon-dentist and his *chirurgien-pédicure*, whose salaries were respectively 6000 fr. and 2400 fr. Seven *pharmaciens*—one being at St. Cloud—received an aggregate sum of 23,000 fr. per annum. The Emperor professed a disbelief in medicine and frequent discussions on the subject took place between him and Corvisart, who, true to his courtier instincts, always allowed himself to be convinced by his Imperial master's arguments. Corvisart, however, had his revenge when he cured him of scabies caught at the siege of Toulon. The playful sarcoptes is evidently no respecter of persons.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Influence of Light on Bacteria and the Self-cleansing of Rivers.

IN the volume of essays dedicated to Professor von Pettenkofer on the occasion of his jubilee is a paper by Professor H. Büchner on this subject. Sedimentation, the oxygen of the air, the action of algæ and other factors affect chiefly the chemical aspect of this question. The water of the Isar immediately above Munich was found to contain 305 bacteria in 1 c.cm.; 1 kilometre below, 15,231 in 1 c.cm.; 33 kilometres below, 2378 in 1 c.cm. The Isar takes about eight hours to flow these 33 kilometres, so that in eight hours the river is able to free itself of the greater part of the bacteria poured into it in Munich. Professor Büchner thinks the only sufficient explanation is to be found in the effects of sunlight, and he has carried out a number of experiments to show this.

The Treatment of Diphtheria.

Levy and Knopp[1] report the results of the treatment of diphtheria with papayotin and carbolic acid. Experiments were first made on guinea-pigs. A *bouillon* culture containing diphtheria poison was prepared according to Behring's formula and of such strength that 0·5 c.cm. killed a full-grown guinea-pig in two days with typical symptoms of diphtheria. If to the poisonous *bouillon* a little papayotin was added it was found by the experimenters that the animals recovered from so large a dose as 2 c.cm., though they were not entirely immune. To adapt the treatment to children a mixture of papayotin and carbolic acid was employed as paint,

[1] Berliner Klinische Wochenschrift, No. 32.

the theory being that the papayotin by its action in digesting the diphtheritic membrane would give the carbolic acid an opportunity to reach the bacteria and kill them, whilst the carbolic acid would give the papayotin the opportunity to destroy the diphtheria poison. The solution used was: Papayotin (Gehe), 10·0; pure liquid carbolic acid, 5·0; distilled water to 100·0; to be shaken before using. The membrane was painted gently, without any attempt at removal, for the first two hours every ten minutes and afterwards every two hours. The observers consider their results very satisfactory. Fifty-three cases were treated in hospital. Of these two were removed, as they were getting better, and are not counted. Of the rest (fifty-one cases) thirty-six recovered (one after tracheotomy) and fifteen died (five after tracheotomy).

A Pseudo-Cholera-Bacillus.

In water from the Elbe at Hamburg and in some water in Berlin a bacillus has been discovered by two independent observers[2] which very strikingly resembles Koch's comma bacillus, both morphologically and in its behaviour in various nutritive media; it is stated also to show the cholera red reaction in a manner undistinguishable from the true comma bacillus of Koch. Both observers are of opinion, however, that the newly discovered micro-organism is not identical with that which is found in the intestines of cholera patients.

Osteomalacia.

Dr. Tschistowitsch[3] reports the results of his examination of the blood in a case of this disease. He was not able to find in the blood the micro-organism described by Winogrdsky, nor could he obtain any growth either in the medium suggested by that observer or in ordinary peptonised bouillon. Testing, according to Petrone, for nitrous acid in the urine, he failed to obtain decisive results. The formation of red blood-corpuscles was diminished at times and at other times went on well, but there was a diminution in hæmoglobin. As far as the white blood-corpuscles were concerned the lymphatic elements were increased, the mononuclear cells diminished and the eosinophile cells variable.

Endocarditis Gonorrhoica.

Professor Leyden[4] publishes a case under the above title. A man aged twenty-two was admitted to hospital with gonorrhœal rheumatism, chronic gonorrhœa and epididymitis. His case ran a course characteristic of malignant endocarditis and ended fatally. From the vegetations on the cardiac valves the gonococcus was obtained in pure culture, unmixed with streptococcus or staphylococcus, or any other form of bacteria.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Electoral Reform at the Melbourne Hospital.

SEVERAL methods of reform have been suggested with reference to the quadrennial election by the subscribers of the staff of the Melbourne Hospital. Many years ago it was proposed that the staff should be appointed by a special electoral committee; but the subscribers would not hear of it. Again in 1890 the committee of management asked the advice of the staff on the subject, and the staff, after much deliberation, recommended that the tenure of office should be increased to fifteen years and that vacancies on the in-patient staff should be filled by the promotion of the senior members of the out-patient staff, candidates for the vacancy so caused on the out-patient staff to be elected by the subscribers. No action was taken, however, and the next election in 1891 afforded a most glaring example of the defects of the present system and resulted also in some changes in the *personnel* of the staff. Quite recently the committee conferred with the staff on the matter, and as a result of the conference a scheme was drawn up which was almost identical with that suggested in 1890; when the committee met to formally pass the scheme, however, some members who had agreed to it at the conference opposed it, and it was rejected by a narrow majority. Of course there were objections to the scheme, which were fully ventilated in the daily press, the chief ones being that the proposed reform was illogical, the mode of election to vacancies in the out-patient staff being unaltered, and that the present staff proposed the scheme entirely from selfish motives and in order to prevent the election of outsiders directly to the in-patient staff; all, however, agreed in condemning the present system. The chief evil connected with it, apart from the degrading canvassing for votes which it necessitates on the part of candidates, is that it is possible to create dummy votes. Every subscriber of £1 has a vote, and a candidate by paying, say, £500 as separate subscriptions in the name of individuals he is able to control can thus create 500 votes, which could be plumped in his favour. Further, any subscriber not in the colony can vote by proxy, so that the candidate, if he is adroit, will give in his votes in the names of residents in other colonies and get the proxies made in his own favour. To obviate this abuse the staff submitted a proposal to a recent meeting of the committee for the abolition of plumping and proxy voting and that no one should be allowed to vote who had not subscribed for at least two years. Another defect in the present arrangement is the want of some link between the hospital and the University, and it has been proposed by a member of the committee that the staff should be increased by the appointment *ex officio* of the lecturers on medicine and surgery at the University as physician and surgeon respectively to the hospital. The lecturer on obstetrics and gynæcology has already an *ex officio* position on the staff of the Women's Hospital. It may perhaps be somewhat significant of the present attitude of the subscribers to the proposed reforms that at a recent election of the committee the two members who first agreed to and then opposed the suggestions of the staff were candidates for re-election and were rejected, whilst two members who voted for the proposals were re-elected and four new members were elected who were known to be favourable to the views of the staff.

A Conflict of Medical Evidence.

A trial has just been concluded at the Criminal Court, Sydney, which presents several features of medical interest. On June 25th last a man named Thomas Pert was assaulted by a number of roughs at a place called Miller's Point. During the scuffle he was kicked on the head—at least, so it was alleged. He got up, staggered a short distance to his house and died in about five minutes. A post-mortem examination was made next day by Dr. Milford, a surgeon who has practised for many years in Sydney and who was formerly lecturer on surgery at the University. The coroner, acting on some information he had received, instructed Drs. Jamieson and Rennie, the pathologists at the Sydney and Prince Alfred Hospitals respectively, to make a further examination on the following day, Dr. Milford being present. At the inquest and subsequent trial Dr. Milford stated that the cause of death was suffocation, due to an effusion of blood into the lungs from a rupture of a pulmonary vessel and probably caused by a man falling over the deceased. Drs. Jamieson and Rennie, on the other hand, said that the cause of death was respiratory and cardiac paralysis, due to the pressure on the medulla of blood extravasated from a rupture of the vertebral artery and probably caused by the kick on the head. They said that the bronchi contained no blood and that the membranes of the spinal cord were distended with effused blood. Dr. Jamieson said he could only account for Dr. Milford's statement by supposing that gentleman to have mistaken the pulmonary veins for the bronchi. When Dr. Milford was recalled he said that the vertebral artery was uninjured and that the condition described by the other pathologists existed only in their imaginations. The jury returned a verdict of "Manslaughter." Another peculiarity of the trial was that one of the jurymen was found to be suffering from melancholia, with delusions. The jury had to be discharged and a fresh trial instituted.

Appointment of a Government Pathologist in New South Wales.

The Government have created a new office—that of Government Pathologist for the coroner's district of Sydney—and have appointed Dr. G. E. Rennie to the position with a salary of £300 per annum. Professor Anderson Stuart, the Government Medical Adviser, denies that the office was created owing to the conflict of medical evidence in the case just referred to, but it is a rather remarkable coincidence all the same.

A Quack charged with Manslaughter.

Another recent trial of medical interest was that of a quack named Paul Duflöt at Warrnambool, Victoria, on a charge of manslaughter. Duflöt, who styles himself

[2] Hygienische Rundschau, Aug. 15th, and Deutsche Medicinische Wochenschrift, No. 33.
[3] Berliner Medicinische Wochenschrift, No. 38.
[4] Deutsche Medicinische Wochenschrift, No. 38.

"the French-Canadian Healer," but who is unregistered, treated a woman suffering from dyspepsia with what he calls his "Precious Powder," consisting of twelve ingredients, the chief ones being aloes, rhubarb, capsicum, bicarbonate of soda, gentian and cinchona. He subsequently gave her an "American cathartic pill," containing jalap, gamboge and calomel. The patient became very ill, with vomiting and purging, the stools contained blood, and a registered practitioner was called in and attended her till she died. A post-mortem examination revealed intense gastro-enteritis, and three practitioners testified that in their opinion this condition was produced by Duflôt's treatment. The judge summed up strongly against the accused, but he was acquitted and received quite an ovation from the populace. All over the colonies quacks flourish in a remarkable manner. Their name is legion—Chinese doctors, herbalists, electric healers, clairvoyants, psychopathists. The newspapers teem with advertisements from people of all kinds, from the "celebrated French specialist" to the "ladies' nurse of twenty years' standing," who profess their ability to cure females "of all irregularities, however caused."

Forging a Medical Diploma.

Seeing that quacks thrive so well, it seems strange that anyone should jeopardise his liberty in order to appear as a qualified man, but last month a man named Gill was tried at Sydney "for having forged what purported to be a diploma from the Royal College of Surgeons of Ireland." The jury found that the accused committed the forgery, but had no guilty intent, and the judge had to acquit him. A strange verdict truly.

Filaria Sanguinis Hominis.

At a recent meeting of the Queensland Medical Association the filaria sanguinis hominis came up for discussion, and Dr. T. L. Bancroft submitted some deductions concerning the life history of this parasite somewhat at variance with the well-known and generally accepted conclusions of Dr. Manson. Dr. Bancroft thinks that no intermediary host is necessary for the development of filariæ. He argues that as they mature early they probably have a short existence, and if the mosquito is essential to their propagation the removal of filariated subjects to countries where there are no mosquitoes ought to free them from their parasites in the course of time. This, however, is found not to be the case and Dr. Bancroft believes that filariæ propagate like ordinary nematoid intestinal parasites and that their life circle can be complete in one host. In dogs he has found very young forms of the filaria immitis as well as adult forms. He suggests also that the nocturnal habits of the filariæ are not adapted to those of the mosquito, for in Queensland that voracious pest is not nocturnal, and that the filariæ lie quiet in the day because then they are in danger of being injured by the muscular contractions of their host, whilst during his sleep they can swim about with impunity. Dr. E. S. Jackson drew attention to the effects of the filaria on its human host in Queensland. From an observation of forty cases he finds that they are less than might have been expected. The disease appears to affect only the native-born or people who come to the colony at an early age, whilst the aborigines appear to be exempt. The effects observed were: dilatation of the inguinal lymph vessels, enlargement of lymphatic glands, formation of lymph vesicles upon portions of the affected limb, elephantoid swellings chiefly confined to the lower extremities, chyluria, lymphatic abscesses and pyrexial attacks. No treatment seemed to have any effect.

A Case of Simultaneous Ligature of the Subclavian and Carotid Arteries for Innominate Aneurysm.

At the Melbourne Hospital Dr. C. S. Ryan quite recently tied the right common carotid and right subclavian arteries for aneurysm of the innominate in a middle-aged man. Kangaroo tendon was used for ligature. The patient died next day in a cyanosed and comatose condition. At the post-mortem examination the aneurysm was found to be an isolated dilatation of the wall of the aorta just at the origin of the innominate and left carotid arteries. Old and recent clot was deposited in the sac and apparently blocked the orifice of the left carotid artery, so that the central circulation after ligature was dependent solely on the vertebrales,

ANONYMOUS GENEROSITY. — The treasurer of Guy's Hospital has received a cheque for £500, through a firm of solicitors, from a lady who desires that her name shall not be made public.

Obituary.

CHARLES CLAY, L.R.C.S. EDIN., L.R.C.P. LOND.

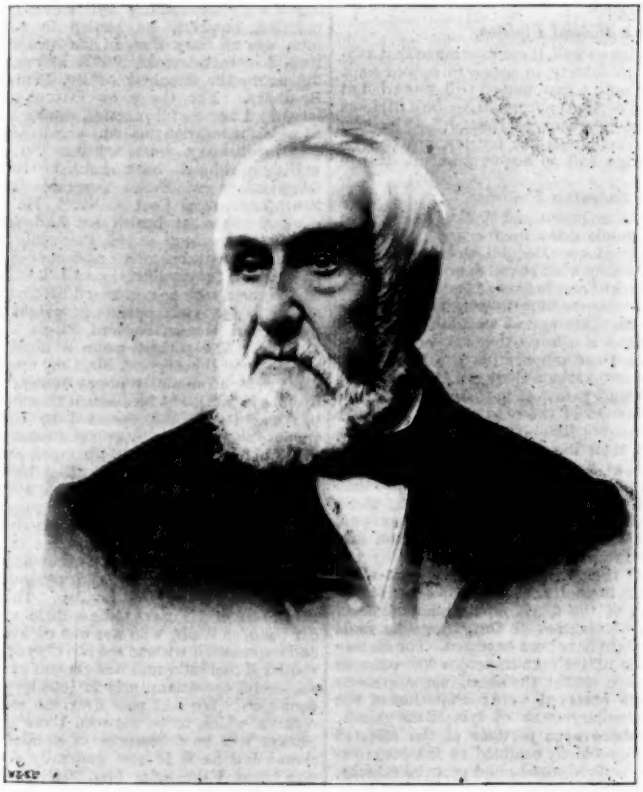
MR. CHARLES CLAY, who was very generally called the "Father of Ovariotomy," died on Sept. 19th at Poulton-le-Fylde, near Blackpool, at the age of ninety-one years and nine months. He was born at Bredbury, near Stockport (where his father, Mr. Joseph Clay, owned Arden Mills), on Dec. 27th, 1801, and early evinced a strong inclination for the study of medicine. Whilst yet a youth he became the pupil of Mr. Kinder Wood, who was the principal physician to the Lying-in Hospital and lecturer on midwifery at Jordan's School of Medicine in Manchester. In 1821 he entered the Edinburgh University, studying under, amongst others, Munro, Hope, Hamilton and Thatcher. He obtained the qualification of L.R.C.S. Edin. in 1823 and was immediately offered an opportunity of joining Dr. Thatcher. Preferring general practice, however, he settled in Ashton-under-Lyne and soon was so busy that, in his own words, he "hardly had time to get married." But before the year was out he did marry the daughter of Mr. John Vawdrey, surgeon, of Bredbury. For the next fifteen years he conducted a large and successful practice, during which time he acquired a wide reputation as an accoucheur. He found time also for literary work, editing the *Ashton Reformer* and writing a valuable book entitled "Geological Sketches and Observations on Fossil Vegetable Remains &c. from the South Lancashire Coal Fields." He also filled the post of medical officer of health for Andenshaw for some years. In 1839 he removed to 101, Piccadilly, Manchester, where he practised as an operating and consulting surgeon. In 1842 he obtained the qualification of L.R.C.P. Lond. In September of the same year he performed his first ovariotomy, removing a growth thirty-six pounds in weight from a patient in the presence of Messrs. Radford, Black, Vawdrey, Southam and Hensem. The patient made a rapid recovery. Following closely upon this success, Mr. Clay operated in fourteen more cases with a similarly happy result. He had seen Lizars operate in 1823, but he claimed that he was the first surgeon in Europe who had operated by the large incision. His services soon became in great demand as an operator all over the country, but he met with much opposition, although the kindly and invariable support that he received from Sir J. Y. Simpson, Sir A. Knight of Liverpool and Dr. Braithwaite (of the *Retrospect*) enabled him to persevere—to which support he alluded with gratitude until his dying day. In 1857 his health gave way under the stress of work, but during his period of rest he was not unoccupied, for he wrote a long paper recording 395 cases and presented it as a report to the Obstetrical Society of London. This report showed the death-rate of his cases to be a little more than 25 per cent. Sir Spencer Wells, who was one of his enthusiastic audience and expressed a wish to see Mr. Clay operate, soon afterwards visited Manchester and was present at one of Mr. Clay's most successful operations, and in 1858 he performed his own first operation. We will pass over the unfortunate difference of opinion which arose between these great surgeons. There always will be differences of opinion about great innovations; and as it is now generally conceded that Mr. Clay was what Fehr calls him, "the original hero of ovariotomy," it is quite immaterial to the purposes of this notice to discuss the details of his methods of operation. In 1845 Mr. Clay performed with success the extirpation of an entire fibroid uterus, and here at least there was no dispute about his being the first in the field, for Professor Koeberlé's celebrated case did not occur until 1870, before which time Mr. Clay had repeated the operation in the presence of Sir J. Y. Simpson in 1863. Before passing from this side of Mr. Clay's work it is right to place on record how generally he has been recognised as the pioneer of ovariotomy. Dr. Peaslee of New York says in his book on ovarian tumours "To Dr. Charles Clay, more than to all other operators, the credit belongs of having placed the operation of ovariotomy on a sure foundation." Mr. Lawson Tait, in "Diseases of the Ovaries," is still more explicit as to the position that Mr. Clay occupies in his mind. "Looking back," he says, "upon the work of a generation now almost passed from a standpoint altogether free from personal bias, I have no hesitation whatever in ascribing to Dr. Clay by far the larger share of the credit which arises from the enormous

advances made in abdominal surgery during the last forty years. It is quite true that McDowell was the first to do a number of ovariotomies, and it is equally true that Houston was the first successfully to remove a diseased ovary, but it was Clay of Manchester who first showed that ovariotomy could be made an operation more justifiable by its results than any of the major operations of surgery." Mr. Bryant has also spoken of Mr. Clay as "the first great apostle of ovariotomy in this country."

To give a full record of all Mr. Clay's works would not be entirely in place here, but amongst his medical writings may be mentioned papers upon Ovariotomy, Abdominal Section, Cæsarean Section and Utero-Gestation—his surgical articles in THE LANCET alone number nearly one hundred—and a paper upon the uses of ergot of rye, which was his first medical communication and was published in 1824 in the *Medico-Chirurgical Magazine*. He also published "The British Record of Obstetric Medicine," the "Handbook of Obstetric Surgery," in which are included accounts of 180 of his operations, and "Hints for an Obstetric Cyclopædia." In 1866 he was awarded the Jacksonian Prize for an essay on "Asphyxia, or Restoration to Life from Apparent Death."

Mr. Clay was not only a keen surgeon, but outside his profession was well known as an authority on geology, archæology and numismatics. He collected over 1000 editions of the Old and New Testaments, which were sold in 1883 in London for a large sum. He published in 1849 "The Currency of the Isle of Man," illustrated by photographs of his own collection, which included every coin known in the island. He also possessed the largest collection of the silver and copper coinage of the United States, which he eventually disposed of to the Government of that country. For a time he was President of the Manchester Numismatic Society and was a Member of the Brussels, Boston, New York, Montreal and London Numismatic Societies. He was formerly President of the Manchester Medical Society, an original Member of the Obstetrical Society of London, and also belonged to many societies of Literature, Science and Art at home and abroad. He likewise held the post of Senior Physician and Lecturer on Midwifery at St. Mary's Hospital, Manchester.

The writer of this notice has had the privilege of attending Mr. Clay professionally during the last eight years. Up to the day of his death he possessed every faculty, took an interest in medical and general topics and devoted a good deal of his time to his garden. On the day that he died he had journeyed to Blackpool to look at a new house that he contemplated taking, and he seemed to be particularly strong and walked a great deal. In the afternoon, when he had returned, he was chatting with a friend, when suddenly he fell from his chair dead. During his later years he seemed to wish to forget the disappointments of former days in the satisfaction of knowing that Mr. Tait and others had vindicated his claims to the title of "Father of Ovariotomy." He frequently said to the writer, "Some men have got baronetcies, some wealth, some positions at Court, but I have got peace of mind." He was kindly, considerate and courteous, but fearless and outspoken. (The engraving is from a photograph taken by Mr. Milton G. Wilde of Blackpool about three years ago.)



DR. CESARE OLIVIERI.

SUICIDE is lamentably common in Italy and this is the case amongst classes that might be supposed to attach their true value to such memorable sayings as that of Socrates in which the deliberate self-destroyer is likened to the soldier who deserts his post, or as that still more familiar one of Dr. Johnson that there never was a suicide yet that could not have been averted by half-an-hour's wholesome conversation with an authoritative friend. Mental derangement, even if only temporary, cannot but be the sole explanation of such acts as those by which surgeon of rare

eminence like Count Loreta of Bologna and in this instance Professor Cesare Olivieri of Naples violently cut short their lives. This latter case, of which we have already made brief mention as a peculiarly distressing one, seems to have been premeditated; but the friend and colleague who saw the victim day by day before the tragedy was, like the Olivieri family itself, completely and most painfully surprised by its suddenness. The deceased was one of the most conspicuous figures in the Neapolitan school, in which he was revered and beloved as "il decano degli operatori" (the dean of the operating surgeons). He held more than one distinguished post, notably the directorate of the vast Pellegrini hospital and the clinical lectureship in the Incurabili, with its 2000 beds for all classes. He had for some time been afflicted with a very grave tracheal malady, undoubtedly malignant in its nature, and after due consultation with his colleagues he underwent a few days ago the operation of tracheotomy at the hands of his friend and pupil, Dr. Mottola. Everything had gone well and artificial respiration was established and maintained, without inconvenience, by a cannula. Nothing could have exceeded the attention bestowed on the distinguished patient, who was seen from time to time even during the night; but in the early morning of the 17th inst., on the occasion of another of these visits, Dr. Mottola on approaching the bedside saw that the throat had been wrapped round and round with a towel. He addressed Dr. Olivieri by name and, receiving no answer, shook him, but without effect. The patient was dead, having withdrawn the cannula from the throat, which he had afterwards enveloped in the manner described. Death had been induced by suffocation—a result which Dr. Mottola at once hastened to report to the Questura. On returning with an agent of that office he found on a table beside the deceased a letter in which "the undersigned, Cesare Olivieri," in despair of ever being cured of his malady and shrinking from the prospect of continued suffering, had expressed his determination to put an end to his days. But for this local affection Professor Olivieri appeared to be in sound health of mind as well as of body and bore his seventy-one years with elasticity and vigour. The deed, so sad in its suddenness, by which he cut short his life has left a painful impression in the town, in which he was an exemplary citizen, and in the medical school, in which he was a man of light and leading. The funeral, which took place on the following day at 3 P.M. from his house in the Via Mondragone, was well attended, as many of his colleagues who had returned from their *villeggiatura* were present as well as a large number of students who had just arrived for the session which was soon to open.

DAVID RUSSELL, M.D. ST. AND., L.R.C.S. & L.M. EDIN., L.S.A. LOND.

DR. DAVID RUSSELL of Vine House, Neston, who died on Thursday, Sept. 14th, at his native town of Leith, was widely known and highly respected in his neighbourhood, not only for his medical skill but also for his clear judgment and business capacity, which rendered him a most valuable member of the directorate of all the prominent local institutions. He was born in 1829 and studied under Dr. Braid of Manchester, with whose son he afterwards went into partnership at Wirral. Later, succeeding to the whole practice, he became one of the most prominent practitioners in the district. He was chairman of the Neston and Parkgate Local Board, Hon. Lieutenant-Colonel of the 1st V.B. Cheshire Regiment, chairman of the Parkgate Gas Company, medical officer for the Wirral Union and honorary surgeon to the Parkgate Convalescent Home. Dr. Russell's health had been failing for some months and he died at his brother's house on the return journey from a trip to Scotland taken with the object of recruiting his health.

S. H. HOBLEY, M.D. DURH., L.R.C.P. LOND., M.R.C.S. ENG.

WE regret to announce the death of Dr. Hobley of Southampton, which occurred on Sept. 4th at the early age of forty-eight. He was an Associate of King's College, London, and a Graduate of Medicine of Durham University. After filling the post of medical officer to the Gloucester County Asylum he came to Southampton some twenty years ago as house surgeon to the Hants Infirmary, and on his retirement from that position commenced private practice in the town. His abilities and devotion to his work soon met with general recognition. He was appointed sanitary surveyor to the Port of Southampton, Medical Officer of Quarantine under the Privy Council, and held in addition the post of medical adviser to the local branches of many important friendly societies. He married the eldest daughter of Mr. Joseph Robins, solicitor, who survives him, and much sympathy is felt with Mrs. Hobley in her bereavement, which was, however, not unexpected, as Dr. Hobley had suffered from internal cancer for several years.

E. C. HAWARD VAN BUREN, M.D., CH.D. BRUX., L.R.C.P. LOND. & EDIN., M.R.C.S. ENG.

WE regret to record the death, from typhoid fever, of Dr. Van Buren, which occurred on Sept. 13th at his house in Worthing. The deceased gentleman was the son of Mr. Cartwright Haward, barrister-at-law, and took the name of Van Buren from his stepfather, the late Mr. Martinus Van Buren of Rotterdam. He received his medical education at St. George's Hospital, where he became assistant house physician. He was afterwards medical officer to the Bucks General Infirmary and the Kensington Infirmary, and previously to his settlement in Worthing three years ago as partner to Mr. W. S. Simpson he travelled as medical attendant upon the late Duke of Sutherland. Dr. Van Buren's death came as a great shock to his friends. He was only thirty-four years of age, and his vigorous constitution seemed to foretell for him a long life, to be spent, as all who knew him would testify, in increasing usefulness.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated below:—

Surgery.—C. F. Bowen, Pennsylvania; H. D. B. Castle, King's College; R. L. Dickinson, London Hospital; W. R. Fisher, London Hospital; G. G. B. Hein, St. Thomas's Hospital; J. Jones, Manchester; E. W. Joscelyne, St. Mary's Hospital; B. S. Mankar, London Hospital; A. W. Seal, University College; C. H. Stewart, St. Thomas's Hospital; and F. L. Taylor, Aberdeen.

Medicine, Forensic Medicine and Midwifery.—H. W. Beedham, Cambridge University and London Hospital; H. D. B. Castle, King's College; J. G. Faber, St. Bartholomew's Hospital; J. Thornton, London Hospital; A. R. P. Sanderson, St. Thomas's Hospital; T. Stevens, Charing-cross Hospital; and H. Whichella, St. Thomas's Hospital.

Medicine and Forensic Medicine.—R. A. Cowie, Cambridge and St. Thomas's Hospital; J. Davies, St. Mary's Hospital; F. W. Kerbey, London Hospital; A. V. Peatling, Cambridge and St. Thomas's Hospital; W. J. Rogers, St. Bartholomew's Hospital; and E. M. Wilkes, Edinburgh.

Medicine.—F. V. Denne, Westminster Hospital; E. Howgate, Leeds; and E. B. Pellatt, Royal Free Hospital.

Forensic Medicine and Midwifery.—C. F. Bowen, Pennsylvania; H. T. Dufton, Cambridge and St. Bartholomew's Hospital; W. C. Lattey, St. George's Hospital; W. E. Pain, Guy's Hospital; and T. H. P. Peers, Charing-cross Hospital.

Forensic Medicine.—S. C. C. Fenwick, St. Mary's Hospital and M. Ferguson, New York.

Midwifery.—S. Gresswell, St. Bartholomew's Hospital.

The diploma of the Society, entitling the candidates to practise Medicine, Surgery and Midwifery, and enabling the holder to compete for medical appointments in the Army, Navy and India Service, and also for Poor-law appointments, has been granted to the following:—

Messrs. Beedham, Castle, Denne, Dufton, Gresswell, Howgate, Joscelyne, Pellatt (Miss) Rogers, Stewart and Thornton.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the examination for the Licence in Sanitary Science, held in September, 1893, the following candidate satisfied the Examiners:—

Arthur Lewis Copner, M.R.C.S. Eng., L.R.C.P. Edin.

At the second examination for the degree of Bachelor in Medicine, held in September, the following candidates satisfied the Examiners:—

First-class Honours.—Thomas Brice Poole, Guy's Hospital.

Second-class Honours.—Frederick Charles James, St. Thomas's Hospital; Charles Allan Brough, L.R.C.S., L.R.C.P. Edin., Edinburgh School of Medicine; John Robert Adamson, College of Medicine, Newcastle-upon-Tyne; and Norman William Eley, Mason College, Birmingham.

Pass List.—Richard Henry Bellwood, Arthur Basil Rivington Body, Harry Crichton, Leslie Davidson, Wilfrid Maynard Dawson, Robert Charles DeLacey, Lachlan George Fraser, George William Harbottle, Allen Holmested Hobbs, Alfred Phillips Lloyd, John

Stanley Manford, Richard Arthur Mills-Roberts, Herbert Newsome, William Wilkie Ridley, William Henry Rowell and Frederick Septimus Walker, College of Medicine, Newcastle-upon-Tyne; William Henry Brown and Frederic Reginald Sutton, Mason College, Birmingham; Edward Fielden, Owens College, Manchester; Richard Withers Gilmour and Arthur Cressée Underwood, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Howard Percy Kennard, St. Thomas's Hospital; and Richard Oswald Mather, Liverpool School of Medicine.

FLEETWOOD COTTAGE HOSPITAL.—The annual meeting of this institution was held on the 14th inst., when a satisfactory report was read. Mention was made of a new hospital which it was proposed to build at a cost of £2250. At present the sum of £700 was in hand for this purpose and £300 had been promised. Land to the value of £700 had also been given.

UNWHOLESOME FOOD.—Last week Mr. Slade, at the Southwark Police-court, made an order for the destruction of 50,000 putrid herrings. The herrings had come from Grimsby. At the same court a large quantity of grapes and other fruit which had been seized was condemned as being unfit for human food.—On Wednesday last, at Clerkenwell Police-court, no less than three cases were heard in which persons were summoned for exposing for sale various articles of food in a more or less advanced stage of putridity. Fines varying from £3 to £5 were inflicted.

ABATTOIRS AND COW-HOUSES IN LONDON.—On Tuesday last, at a meeting of the Board of Works for the St. Giles's district, the subject of the propriety of renewing the licences which had been applied for by the owners of slaughter-houses and cowsheds was brought forward. Several members of the board expressed a strong objection to the perpetuation of the existence of such places in crowded thoroughfares, as being sources of ill-health even under favourable circumstances. Ultimately the question was referred to the Sanitary Committee for consideration.

LITERARY INTELLIGENCE.—Mr. H. K. Lewis has just issued a work upon the diseases of the ear, nose and throat. The book is in two volumes and contains the joint work of forty-five British, Canadian, American and Spanish authors. It is edited by Dr. Charles Burnett, of the Presbyterian Hospital, Philadelphia, and Professor of Otology in the Woman's Medical College, Pennsylvania.—In the review of Dr. Pepper's work, "A Treatise on the Theory and Practice of Medicine by American Teachers," which appeared in our issue of Sept. 9th, we omitted the name of the English publisher—Mr. F. J. Rebman.—We understand that Her Majesty the Queen of Italy has graciously accepted the dedication of the Italian translation of Mr. Samuel Osborn's book of Ambulance Lectures.

BLACKPOOL HOSPITAL.—For many years it has been a serious reproach to Blackpool that though it prided itself upon being the most popular health resort in the North of England as well as being in the forefront as regards sanitary improvements, it had no general hospital. This slur upon its character will very shortly be removed, for a well planned hospital is now being erected and a bazaar which has been held has realised considerably over £5000. Blackpool has a resident population of about 25,000 inhabitants and is visited annually by nearly 2,000,000 people. It was the first town in England to adopt electric light in the streets, and this illuminant is now being supplied by the corporation to the houses. It was also one of the first towns to voluntarily adopt the Infectious Diseases Notification Act. It has a fine sanatorium for the reception of infectious cases; it has also a medical officer of health, whose whole time is devoted to the duties of his office, a staff of sanitary inspectors, and now it is about to have a well-equipped hospital for the reception of general or accident cases. The plans for the new hospital show an executive building capable of dealing with fifty patients, and five separate wards of ten beds each. For the present it is only proposed to erect the executive department, using the spare rooms in it as temporary wards, but as the funds and the requirements of the town increase the wards will be added. A convenient operating theatre will be built at once, together with a pathological room, on the most modern principles. The appointment of a medical and surgical staff has yet to be made, and it is to be hoped that this will be done in accordance with the well-recognised rules which obtain elsewhere, by means of which the best professional services are placed at the disposal of the poor.

COURSES of Extension Lectures in Sanitary Science in connexion with the Yorkshire College, Leeds, will be held during the session 1893–94 for the purpose of instructing officials and their assistants holding office under local sanitary authorities. The courses, which will be held in various centres, include hydraulics and water supply, road-making, town sewerage works and house sanitation. A small fee will be charged to cover the incidental expenses.

THE ELEVENTH INTERNATIONAL CONGRESS OF MEDICINE.—The following appears in the Roman journals of Tuesday, the 26th inst.:—"Notice is hereby given to those persons who have communications to announce or questions to put with regard to the Eleventh International Medical Congress and its annexed Exhibition, both of which will be opened by appointment on April 1st, 1894, that the secretary will be on duty at his office every day from the hours of 1 P.M. to 5 P.M. in the Palace of the Exhibition of the Fine Arts in the Via Nazionale, Rome."

FEVER HOSPITAL RETURNS.—The number of patients remaining in the several fever hospitals of the Metropolitan Asylums Board at midnight on Sept. 26th was as follows:—Eastern Hospital: 252 scarlet fever, 54 diphtheria and 47 enteric fever; North Eastern Hospital: 438 scarlet fever; North Western Hospital: 256 scarlet fever, 88 diphtheria and 25 enteric fever; Western Hospital: 278 scarlet fever, 21 diphtheria and 13 enteric fever; South Western Hospital: 272 scarlet fever, 52 diphtheria and 20 enteric fever; South Eastern Hospital: 360 scarlet fever, 26 diphtheria and 4 enteric fever; Northern Hospital: 686 scarlet fever; and Lower Gore Farm Hospital: 201 scarlet fever. On the same date 82 cases of small-pox were reported to be in the wards of the hospital ship *Atlas*.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BERRIDGE, W. R. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent of the Infectious Diseases Hospital, Leicester, for twelve months.

DAY, F. W. LANGSTON, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for Hitchin, vice Jenner, resigned.

DOUGLAS, ARCHIBALD ROBERTSON, L.R.C.P., L.R.C.S. Edin., M.P.C., has been appointed Assistant Resident Medical Officer at the Royal Albert Asylum, Lancaster.

ECCLES, HERBERT ANNESLEY, M.B. Lond., M.R.C.S., has been appointed Assistant Resident Medical Officer at the London Fever Hospital, Liverpool-road, N.

GRANGE, FRANK, M.D. Lond., L.R.C.P., M.R.C.S., and J. D. FARQUHARSON, M.B., C.M. Edin., have been appointed temporarily and jointly to the offices of Sanitary Surgeon to the Board of Trade and Medical Inspector of Emigrants at Southampton, vice Dr. Hobley, deceased.

HOOPER, G. H., M.R.C.S., L.R.C.P., has been appointed Resident Obstetrical Officer at Charing-cross Hospital.

HUNTER, CHRISTOPHER, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Carrickmore District of the Omagh Union, vice Leitch, resigned.

JACKSON, J. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Winchmore District of the Edmonton Union.

MURRAY, GEORGE R., B.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Professor of Comparative Pathology in the University of Durham.

NOLAN, MICHAEL J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Superintendent of the Downpatrick Lunatic Asylum.

NORMAN, R. J. RAINIER, M.R.C.S., L.R.C.P., has been appointed House Surgeon at Charing-cross Hospital.

PRIDHAM, C. FORTESCUE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Stokenchurch and Turville Districts of the Wycombe Union.

PRIDIE, H. HAMPDEN, M.B., C.M. Edin., has been appointed Medical Officer of the Wandsford District of the Stamford Union.

PRIESTLEY, R. C., M.B. Camb., M.R.C.S., L.S.A., has been appointed an Assistant Medical Officer for Paddington for three months.

RAINIER, NORMAN R. J., M.R.C.S., L.R.C.P., has been appointed House Surgeon at Charing-cross Hospital.

RENNIE, GEORGE EDWARD, M.B. Lond., M.R.C.S., has been appointed Government Pathologist for the Metropolitan District of Sydney, N.S.W.

SANDALL, T. EDWARD, B.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician at Charing-cross Hospital.

STEWART, JOHN, M.B., C.M. Glasg., has been appointed Medical Officer of the Soothill Upper District of the Dewsbury Union, vice Laird, resigned.

STONHAM, H. A., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Ratcliff Workhouse.

STUCK, SIDNEY J., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed House Surgeon and Secretary to the Royal Isle of Wight Infirmary and County Hospital, vice Baylis.

WATSON, DAVID, M.B., C.M. Glasg., has been appointed Medical Officer of the Eleventh District of the Wisbech Union.
WATSON, R. H., M.A., M.B., C.M., has been appointed Assistant Physician to the Inverness District Asylum.
WEBB J. B., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the Bristol Dispensary.

Errata.—In our last issue Mr. W. H. Clarke and Mr. C. Averill were stated in error to have been appointed "Assistant Surgeons (additional) to the Macclesfield Infirmary," whereas in fact these gentlemen have been elected Honorary Surgeons to that institution.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN.—House Surgeon. Six months. Board and lodging provided. Applications to be sent to the Hon. Secretary.
EAST LONDON HOSPITAL FOR SICK CHILDREN.—House Physician. No Salary. Applications to Secretary.
EDMONTON UNION.—Resident Medical Officer. Salary at the rate of £100 per annum, for six months, with board &c. Applications to the Clerk of the Union.
FULHAM UNION.—Assistant Medical Superintendent. Salary £100 per annum, increasing £10 yearly to £130, with board &c. Applications to Clerk to the Guardians, Union Offices, Fulham Palace road, Hammersmith, W.
HACKNEY UNION.—District Medical Officer. Salary £80, together with allowed medical fees. Applications to the Clerk to the Guardians, Sidney-road, Homerton, N.E.
HUNTINGDON COUNTY HOSPITAL.—House Surgeon. Salary, with board &c, £60. Applications to Mr. Dilley, Market-hill, Huntingdon.
LIVERPOOL NORTHERN HOSPITAL.—Resident House Surgeon's Assistant (Ambulance Duty). Appointment for six months; may be prolonged. No salary, but board and lodging with other advantages in exchange for services. Applications to the Chairman of the Hospital.
STRATTON UNION, Cornwall.—Medical Officer. Salary £52, with certain extras. Applications to the Clerk of the Union, Stratton.
TAUNTON AND SOMERSET HOSPITAL.—Honorary Physician. Applications to be made to the Secretary, Hammet-street, Taunton.
WESTERN DISPENSARY, Rochester-row, S.W.—Resident Medical Officer. Salary £105 per annum, with furnished rooms, coals, gas and attendance. Applications to the Secretary.

Births, Marriages and Deaths.

BIRTHS.

JOHNSTON.—On Sept. 6th, at Vancouver, B.C., the wife of George D. Johnston, M.R.C.S., of a daughter.
JOULE.—On Sept. 21st, at Maida-hill West, W., the wife of John S. Joule, M.D. Lond., of a son.
WHEELER.—On Sept. 26th, at Dial House, High Wycombe, the wife of Humphry J. Wheeler, M.D., of a daughter.
WILSON.—On Sept. 14th, at High-street, Haverfordwest, the wife of James Wilson, M.D., F.R.C.S., of a son.

MARRIAGES.

BAILEY—LEWIS.—On Sept. 21st, at the parish church, Colney-heath, William Henry Bailey, M.B. Lond., M.R.C.S. Eng., D.P.H., to Kate Mary Lewis, of Gosport.
GALE—COCKAYNE.—On Aug. 17th, at St. Paul's Church, Norton Lees, by the Rev. W. Mercer, M.A., Arthur Knight Gale, L.R.C.P. Lond., M.R.C.S., Norton Woodseats, Sheffield, to Margaret, youngest daughter of William Cockayne, Norton Lees, Sheffield.
GRAHAM—LONGMORE.—On Sept. 20th, at St. Mark's Church, Woolstone, William Perceval Gore Graham, Surgeon-Captain A.M.S., third son of Robert Gore Graham, Esq., of Southmead, Westbury-on-Trym, Gloucestershire, J.P., to Isabel, eldest daughter of Sir Thomas Longmore, C.B., of the Paddock, Woolstone, Hants.
PEARSON—BURRELL.—On Sept. 20th, at St. George's Church, Tufnell-park, N.W, Harry Reason Allen Pearson, L.R.C.P. Lond., M.R.C.S. Eng., to Mary Elizabeth, only daughter of the late Henry Burrell, Esq., of Canonbury, N.

DEATHS.

ARMSTRONG.—On Sept. 24th, at Lansdowne, Farquhar-road, Upper Norwood, William Nixon Armstrong, Deputy-Surgeon-General, A.M.D.
HOSKINS.—On Sept. 21st, at Duffield House, Edward Hungerford Hoskins, M.R.C.S., aged 76 years.
MONCKTON.—On Sept. 23rd, at Marden, Kent, Marshall Monckton, L.F.P.S. Glasg., L.S.A., youngest son of the late Edward Monckton, formerly of the Parsonage, Brenchley, aged 54 years.
SLACK.—On Sept. 20th, at Derwent-hill, Keswick, Robert Slack, M.D., aged 71.
WEBB.—On Sept. 8th, at Littlehampton, John Whiteman Webb, M.D., L.S.A., of Worthing, and formerly of Ramsgate, in his 83rd year.
WILLIAMS.—At Dinard, Brittany, suddenly, David William Williams, M.D., M.R.C.P.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 28th, 1893.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 22	29·61	W.	49	47	107	63	44	..	Bright
,, 23	29·59	S.W.	50	47	78	53	45	..	Cloudy
,, 24	29·85	W.	50	47	99	60	40	·07	Cloudy
,, 25	30·02	W.	51	49	99	62	43	..	Cloudy
,, 26	29·96	S.W.	52	51	102	64	49	..	Overcast
,, 27	29·78	S.W.	58	57	97	67	51	·23	Cloudy
,, 28	29·85	W.	56	54	81	62	51	..	Cloudy

Medical Diary for the ensuing Week.

Monday, October 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL. Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5.30 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin.

Tuesday, October 3.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Skin Department, 1.45; Saturday, 9.15.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, October 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Maclean, Dr. Eden and others. Dr. Boxall: Fever in Childbed (Part II.—The Relation of External Meteorological Conditions to the incidence of Febrile Illness in Childbed).

Thursday, October 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.

Friday, October 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board Room, West London Hospital).—8.30 P.M. Opening Address by the President, Dr Donald W. C. Hood: Typhoid Fever, with special reference to Points in Diagnosis and Treatment.

Saturday, October 7.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 9.15 A.M.

During the week marked copies of the following newspapers have been received:—*Southampton Times, Keene's Bath Journal, North China Daily News, Weekly Free Press, West Middlesex Standard, Surrey Advertiser, Huddersfield Examiner, Liverpool Weekly Post, Carlisle Evening Journal, East Anglian Daily Times, Surrey Mirror, Munster News, &c.*

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

ADVERTISING AND CHEAP MEDICAL ATTENDANCE.

THE following handbill has been sent to us:—

"R. J. O'Farrell, physician, surgeon and accoucheur, has opened a surgery at 145, Ledsam-street, Ladywood. Hours: morning, 9 to 11 o'clock; evening, 6 to 9 o'clock. Fees: advice and medicine, adults, 1s.; children, 6d. Patients attended at their own houses, weekly, 3s. 6d. Midwifery, if engaged beforehand, 10s. 6d."

H. H. A.—We should advise our correspondent, if he is responsible for the negotiations, as we presume he is, to see the consultant and so arrange the question of remuneration. Medical neighbours are expected to attend each other and medical consultants are generally very generous in their help and advice to their professional brethren. The case is a little different when long journeys have to be undertaken, but the same principle applies, and will, no doubt, be applied, in the present case. However, details of circumstance, loss of time &c., have to be considered and make an absolute rule for every case impracticable.

EMPYEMA.

To the Editors of THE LANCET.

SIRS,—Would some reader of THE LANCET who has had a similar case to the following favour me with his advice? I was called to see a man aged forty who was suffering from empyema following a pneumonia. Three days before my first visit he began to expectorate large quantities of pus. Previously to the present illness he enjoyed good health. What line of treatment should be adopted? Would it be good treatment to cut through the chest-wall and drain the pleural cavity as if it were an ordinary empyema? If left to nature what would be the prognosis?

I am, Sirs, yours truly,
Sept. 18th, 1893. T. H. G.

*** If left to nature there would probably be gradual elimination of all the pus, but recovery might be hastened by operation.—ED. L.

YEAST IN DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—I would much like to know whether any of the readers of THE LANCET have tried the "yeast treatment" in cases of diphtheria. One tablespoonful of brewer's or German yeast is mixed in a pint of tepid water and the patient is given as much as he can take at once, whilst afterwards he continues to sip it frequently. During the past two years I have treated fifty cases in this manner—of course in addition to using ordinary remedial measures. All of these cases recovered and in two only have slight constitutional symptoms followed.

I am, Sirs, yours faithfully,
September, 1893. M.B. & C.M.

"KLEPTOMANIA" IN THE CONSULTING-ROOM.

SICILY, the classic haunt of brigandage, seems ambitious of showing that highway robbery does not quite exhaust her methods of breaking the eighth commandment. Some days ago, in Palermo, a well-dressed, pleasant-mannered young man was ushered into the presence of one of the leading alienists and proceeded, on painfully matter-of-fact lines, to state the object of his visit. His dear wife had during the few months since their marriage developed the most distressing, most incorrigible, habit of kleptomania. Not only in public shops and in private visits, but even in her own house, she could not keep her hands off other people's property, which, however, on coming to her real self some hours afterwards, she invariably returned to their owners. Medical treatment had hitherto failed to wean her from the habit, and in his despair he bethought him of the Palermitan expert, whose success in such cases had come to his knowledge. The consultant, having put a few questions which were intelligently answered, expressed his willingness to take the young lady in hand, and appointed an hour on the following day when her husband was to bring her to him. True to time the pair arrived, and the lady had hardly been introduced to the consultant when her beauty and frank, engaging manner imparted a quite peculiar interest to her case. During the interview she conducted herself like a high-bred woman of the world, except for the unfortunate failing she laboured under—pocketing articles of value when she thought she was unobserved. Amongst these the vigilant eye of the consultant missed a photograph framed in brilliants (the gift of a patrician patient) and also a beautifully-modelled statuette of pure gold. He also remarked that just at the moment of bidding him good-day she relieved him in the quickest and most graceful manner possible of a valuable cravat-pin which became "secreted about her person" with the suddenness of magic. "You see yourself," groaned the afflicted husband in an aside to the consultant, "how possessed she is with the thieving instinct. Oh! my poor, unfortunate wife! I will bring you back all the missing articles to-morrow at any hour you may appoint, when you will kindly give me your opinion of the case and advise me what to do." To-morrow came and with it the appointed hour, and the consultant waited and is still waiting for the "well-dressed, pleasant-mannered young man" and his stolen goods. He was as cleverly swindled as Gil Blas was by Don Raphael and Camilla, "niece of the Governor of the Spanish colonies in the Philippine Islands."

M.B., C.M.—We do not clearly apprehend from the short statement made the relation of Dr. A. to Dr. B., or Dr. B.'s responsibility for Dr. A.'s eulogy. We should not like to give an opinion without a fuller knowledge of the facts and circumstances.

THE DIAGNOSIS OF CHOLERA.

To the Editors of THE LANCET.

SIRS,—The recognition of the fact that the presence or detection of the cholera bacillus is not a constant factor reduces the diagnosis of cholera to that of an ordinary disease. This result is a practical advantage, for bacteriological investigation, except as an aid in doubtful diagnosis, could not be relied upon to verify a disease in times of an epidemic. Furthermore, the diagnosis of cholera is exceedingly simple, for if there is one disease more than another in which the symptoms are characteristic of the complaint that disease is essentially cholera. The very expression of the face invariably suffices to declare the true nature of the illness; but, coupled with the whispering voice, the violent cramps, the absence (not suppression) of urine, and the agonising appeal for a long drink, a mistaken diagnosis is highly improbable. Cholera, when once seen, can never be forgotten (Dr. Fenwick), and if instead of surrounding the disease with a halo of mystery the simple method of relying for a diagnosis on the appreciation of the collective symptoms were adopted an error of judgment would be rare and medical men who have not had the opportunity of seeing a case of cholera would be ready to recognise the complaint with facility.

I am, Sirs, yours faithfully,
G. SHERMAN BIGG,
Formerly Staff-Surgeon, Allahabad, India.
Victoria-street, S.W., September, 1893.

A DANGEROUS DOSE.

To the Editors of THE LANCET.

SIRS,—I herewith send you a copy of a prescription I saw in one of the London evening papers and stated to have been given by an eminent medical man. If, as I take it, it is to be made up to a ℥xii. mixture with liq. strychninæ, it would give ℳxviii. of that drug to each drachm:—

"B. Potass. iodid., gr. xii.; ferri citritis, one scruple; mag. sulph., dr. iv.; inf. columbu., viii. oz.; liq. strychnin. M. ℥xii. Take one dram ter die post pastum."

Supposing anyone were so ignorant or foolish as to take "one dram," or two, who would have to pay the penalty for such person's rash act?

I am, Sirs, yours faithfully,
Sept. 19th, 1893. RUSTICUS.

MEDICAL ADVERTISEMENT AT HOXTON.

THE following bill purports to be sanctioned by a "late House Surgeon of Charing-cross Hospital":—

"Hyde-road Dispensary, 70, Hyde-road, Hoxton. Resident medical officer, Dr. E. J. Smith, late House Surgeon to Charing-cross Hospital. The Committee [what Committee?] have appointed Dr. E. J. Smith (late House Surgeon to Charing-cross Hospital) to be Resident Medical Officer to the above institution, who will in future reside on the premises and personally attend all cases. Table of fees: Advice and medicine at dispensary, 6*d.*; by the week, 1*s.*; at home, 1*s.*; at home by the week, 3*s.* Vaccination, Tuesday and Friday mornings. Midwifery. Tooth extraction. Hours of consultation: Mornings, 9 to 12; afternoons at 4; evenings, 6 to 10; Sundays, mornings, 9 to 11; evenings, 7 to 9."

H. J. P. inquires about Ambulance Classes &c. He will find all the necessary information for these classes in Osborn's Ambulance Lectures, published by Messrs. H. K. Lewis of 136, Gower-street. There is sufficient information given in the same book about the use of the triangular bandage; he might, however, consult the English translation of Esmarch's Treatise. We should advise our correspondent to write to Sir H. Perrott, St John's-gate, Clerkenwell, for information about the rules of the St. John's Society.

Locum.—We think our correspondent was fairly entitled to at least half the fee in each of the three cases.

Dr. H. Gabbett might apply to the National Health Society.

RECOVERY FROM THE EFFECTS OF LIGHTNING.

To the Editors of THE LANCET.

SIRS,—The following notes will, I think, prove to be sufficiently interesting for insertion in THE LANCET:—

A labourer aged twenty-four, who was brought to the Infirmary, Burton-on-Trent, on Sept. 8th, was said to have been struck by lightning. He stated that during a storm he was standing under a bush, when the lightning struck the ground close to his left foot. He felt the current run from his foot to the waist, where he perceived a sensation of burning; his legs then became rigid and he lost consciousness. On regaining consciousness, being unable to walk, he crawled across a field, where he was seen from the road and conveyed to the Infirmary, arriving about an hour and a half after being struck. On admission he was conscious, but cold and trembling; there were no marks of burning on his clothes, but his left boot was split open and the sole was torn off; his watch in his waistcoat pocket was still going. He did not appear to be collapsed and had no headache or affection of vision or hearing, but complained of burning pains about his back and abdomen and of coldness of his lower extremities. Over the left lumbar region there were two dark red patches. From one of these a line ran up the dorsal region, branching off in several directions and covering the greater part of the back with a delicate tracery of injected capillaries. A second thick red streak ran downwards between the buttocks, touching the scrotum and running along the inner surface of the left thigh, then became fainter and was ultimately lost about the knee-joint. From the second patch another red streak ran across the abdomen and down the right thigh, sending several branches upwards which covered the abdomen with injected capillaries having an arborescent appearance. On the upper part of the chest there were three or four star-shaped injected patches; there was also a slight red mark over the left ankle. The feet and legs were cold and quite anæsthetic, the plantar reflexes were lost and the knee-jerks were much diminished. The temperature was normal. During the next few hours the temperature rose to 101° F. and the patient complained of headache and of considerable pain in the back and abdomen. During the night he slept well, the temperature fell to 98°, and in the morning he expressed himself as feeling perfectly well, having recovered the use of his legs, with return of sensation; the fainter markings had disappeared, leaving only the deepest lines visible. At the time of the accident the clothing about his trunk was dry, whilst that of his lower limbs was wet.

I am, Sirs, yours faithfully,

C. THOMPSON,

Sept. 19th, 1893. House Surgeon, Burton-on-Trent Infirmary.

Mr. C. E. Cornwall.—Probably the society to which our correspondent refers is the Society for the Relief of Widows and Orphans of Medical Men, 20, Hanover-square, W. The secretary will doubtless accord the needed information.

THE TERMINATION "ITIS."

To the Editors of THE LANCET.

SIRS,—Will you or any of your correspondents kindly tell me the derivation of the termination "itis" in such words as peritonitis, meningitis, typhlitis &c.; or, failing the derivation, why we should understand it to mean "inflammation of"?—I am, Sirs, yours truly,

Wirksworth, Derby, Aug. 29th, 1893. PERPLEXED.

*** The Imperial Dictionary gives the following definition: "'It is: In pathology, a Greek termination, which, when added to the Greek name of any organ of the body or part affected, implies inflammation of that organ or part. Sometimes, as in the case of *rectitis*, it is added to a Latin word, making a hybrid."—ED. L.

A SANITARY CREMATOR.

ACCORDING to the testimony of a Sydney newspaper, the *Town and Country Journal*, our Australasian compatriots are in a fair way of solving a question which has for long been exercising the minds of our advanced sanitarians at home. Details are not as yet forthcoming, but from the statement of our contemporary it would appear that a certain Mr. John Bustard, having devoted a great part of his life to the study and examination of sanitary questions, has succeeded in devising an apparatus which, at the minimum of cost, effectually disposes of town refuse without the drawback of the emission of noxious or unpleasant fumes. The invention, in the shape of a cremator, which has been established at Orange in Sydney, consists of a furnace generating great heat for the destruction, first, of either garbage or night-soil by fire, and then of all noxious gases by heated air, which can be raised to a temperature of something like 3000° F., though one of only 800° is required to consume the foul vapours arising from the first furnace. The process, it would appear, requires but four hours and a half to be completed and will reduce a charge of garbage of any kind, dead animals, night-soil &c., into a marketable fertiliser. The mayor of the town has expressed his complete satisfaction with the result of the experiment, adopted to test the efficacy of the process, and Dr. Goode, who was also present, endorsed the remarks of the mayor and gave it as his opinion that the cremator is likely to satisfy the demands of even M. Pasteur. Meanwhile the verdict of time will have to be delivered on the ultimate success of the invention.

M.D.—It is remarkable that our correspondent's "locum tenens" did not report the circumstance to him. The gentleman who was called in would naturally expect some recognition of his services—if only of thanks. Had this obvious custom been observed it is not likely that the claim which our correspondent reports would have been made in the case of a poor patient. Our correspondent is, we presume, not to be blamed. Our advice would be that "M.D." should see the writer of the letter and explain the circumstances. In a legal sense the patient would be responsible for the consultant's fee, unless he were sent for by, and for the satisfaction of, our correspondent's locum tenens.

"CONTRAVENTION OF THE OATH OF HIPPOCRATES."

To the Editors of THE LANCET.

SIRS,—Your timely remarks upon the "Hippocratic oath" in THE LANCET of Aug. 19th last (p. 448) are well taken and are worthy the attention of the public and of Government officials, especially in countries where the binding nature of the oath is not understood or respected. It is often necessary for medical officers to become the repository of professional secrets which may involve the honour, health and welfare of officers and enlisted men—secrets which, if known to their families or friends, might be productive of serious consequences and much unhappiness. This is particularly the case in the history of venereal disease in the public services when it becomes necessary to enter into detail in the case-papers or medical journals of barracks, ships or stations. In such cases it would seem to be impossible to preserve or keep "professional secrets." Formerly the medical journals and professional papers of the sick were considered sacred and intended exclusively for the eyes of medical men; but, I believe, in some services nowadays, especially in that of the United States (see U.S. Naval Regulations, p. 101), the medical journals are to be inspected by the commanding officer—and, as a consequence, by all others who may become temporary commanding officers,—so that the misfortunes, habits and immoralities of the officers and men may become known to their friends and messmates on every ship or station. In such cases would the medical officer be liable to legal penalties, or could his patients sue him in a civil court for his violation of the Hippocratic oath, even though it is required by Government regulations?

I am, Sirs, yours faithfully,

September, 1893. QUID NUNC.

"THE PUFF DIRECT."

To the Editors of THE LANCET.

SIRS,—You are generally "down" on any attempts at advertising on the part of a beginner in practice on his own account. Unless there is any rule of professional etiquette absolving a locum tenens of an old-established practitioner, I shall feel obliged if you can give insertion to the following paragraph from the general news column of the *Isle of Wight Observer* of Sept. 23rd. I think it deserves more publicity than it is likely to obtain in the circulation of that paper:—

"Owing to Dr. Davey's serious illness, we understand Mr. A. Banks, M.R.C.S. and R.C.P. London, is at present acting as locum tenens. Mr. Banks is not unknown in Ryde, having previously acted as physician-in-attendance on the late Mr. May, on the recommendation of Sir William McCormack. He was lately the House Surgeon of St. Thomas' Hospital, having taken the first College prize and Cheselden medal there, as well as the silver medal in Mat. Med. and Phar. Chem. at the Apothecary Hall."

I am, Sirs, yours truly,

Ryde, Sept. 25th, 1893. DISGUSTED.

Communications, Letters &c. have been received from—

A.—Mr. F. Alcan, Paris; Mr. J. P. Aston, Bradford; Messrs. Ancizar Bros. and Co., Manchester; Ajax, London; Amines Syndicate, Limited, London, Managing Director of; Alpha, London; A. L., London.

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